ANNALES BOTANICES SYSTEMATICAE.

WALPERS.

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TOMUS VI.

AUCTORE

DR. CAROLO MUELLER BEROL.

LIPSIAE.

SUMPTIBUS AMBROSII ABEL.

1861.

SYNOPSIS

PLANTARUM PHANEROGAMICARUM

NOVARUM OMNIUM

PER ANNOS 1851, 1852, 1853, 1854, 1855 DESCRIPTARUM.

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1 Thlr. 6 Ngr.

☞ Jede Zusendung oder Bemerkung die **Annales botanices systematicae** betreffend wird von dem Herausgeber mit größtem Danke aufgenommen und unter ... Müller in Berlin Schöneberger Ufer No. 39 erbeten.

PRAEFATIO.

Hoc volumine sexto Annalium (continuationis meae tertio) cyclum quinquennalem, annos 1851—1855 amplectentem denique absolvo.

Spero fasciculos sequentes nunc brevissimo tempore sequuturos, tum clarissimi Reichenbachii Orchidearum recensionem, tum clarissimi Anderssonii Graminearum collectanea exhibentes nec non indicem generalem generum, specierum et synonymorum orbis totius peracti.

Quod Cyperacearum collectanea attinet, quae una cum Graminibus hoc in opere curare promisit amicus Anderssonius, sed aliis gravioribus laboribus, adhuc sollicitatus nondum suscipere potuerit, maxime lugeo, sed spero illa de Cyperaceis elaborata in sequente lustro cum commentariis de ejus familia recentioribus ab auctore supra citato in lucem postea proditura. Alia omissa et errata si forte lectores benigni animadverterint, mecum communicent, ab iis instanter peto, ut falsa emendentur desiderata autem in novo cyclo postea rite exhibeantur. Denique facere non possum quin et in exordio hujus voluminis finalis gratias denuo agam viris

celeberrimis botanicae scientiae ejusque fautoribus illustrissimis, qui vel consilio vel libris epistolisque vel aliis doctrinae praesidiis suppeditatis in conficiendo hoc opere me adjuverunt.

Quo primo loco grato animo me obstrictum puto viro illustrissimo summoque moderatori rerum ecclesiasticarum et institutionis publicae, Regis ministro de Bethmanno — Hollwegio, deinde professoribus celeberrimis Schlechtendalio, Al. Braunio, Asa Grayo, Fenzlio, Regelio, Lemaireo, Oudemansio, Gussoneo, Bungeo; doctoribus ornatissimis Buhseo Rigaensi, Hansteinio, Garckeo, Karsteinio, Berolinensibus, Oerstedio Havniensi, Peyritschio Vindebonensi, F. Müllero Melbournensi, nec non viris praeclaris Van Hootteo Bruxellensi, Verschaffeltio Gandaviensi Lespinasseo et Perriero, Francogallis caet. caet.

Ita et hunc tomum Annalium fautorum benevolentiae commendo, quorum erga me benignitas maximum mihi erit incitamentum ut semper novo impetu ad orbem denuo suscipiendum et feliciter persequendum strenue conferam ingenii vim ac diligentiam. —

Scripsi Berolini Nonis Augustiis anni 1861.

ANNALES BOTANICES SYSTEMATICAE.

TOMUS VI.

Subclassis II. HELOBIAE Meisn.

Ordo VII. FLUVIALES *Vent.*

(Knth. en. III. 111. 590. — Walp. Ann. III. 504.)

LEPILAENA *J. Drumm.* (*Najadeae?*)

Harvey, new genera of W. Austral. plants, in Kew garden misc. VII. 57.

Fl. monoici, terminales v. pseudo-axillares, solitarii v. cymosi. Masc. solitarii v. terni; flos med. nudus, lateralis spatha membranacea bipartita absconditi, brevissime pedicellati. Perigonium minutum, trisquamosum, squamis obtusis. Antherae 3 monadelphae, sessiles, marg. arctissime cohaerentes, biloc., extrorsae, longitud. dehisc.; pollen sphaericum: — Foeminei (in) furcis ramor. solitarii, nudi, pedunculati, pedunculo fructifero elongato. Perig. triphyllum, foliol. acutis. Ovaria 3, libera, dorso carinata, facie contigua, dem. pedicellata, unilocularia; ovulum unic. pendulum. Drupae v. abortu pauciores.

Herba aquatica, Ruppiae facie. Caulis dichotomus. F. angustissima, b. vaginantia, minutiss. serrulata, acuta.

1. LEPILAENA AUSTRALIS J. Drum. — Hab. In coloniarum fluviis Australiae occid.

PHYLLOSPADIX *Hook.*

Endl. n. 1658/1 p. 1368.

1. PHYLLOSPADIX SCOULERI Hook. — Hook. fl. bor. Am. II. p. 171. tab. 186. — Cfr. Ruprecht Pflz. a. d. nördl. Th. d. st. Oceans p. 8. tab. I. et II. descript. pl., p. 8 — p. 11. — In lapidib. ad littus Californiae superioris, haud procul ab ostio fluminis Slavjaenka, leg. Wossnessensky 1840.

ZOSTERA *L.*

(Knth. en. III. 115.)

1. ZOSTERA SERRULATA Targ. — A. Bertolonii fl. Ital. tom. X. p. 5. — Foliis elongatis, duas lin. latis, superne serrulatis, integrisve.

Cymodoce aequorea König (Kunth en. III. p. 118).

Legi in Laguna Veneta. Perennis.

2. ZOSTERA NANA Ten. (A. Bertol. fl. Ital. tom. X. p. 7). — F. angustissime linearib., ½ lin. latis, 1-nerviis, integris; spadice foemineo superne nudo.

(*Z. nana* Roth (Knth. en. pl. III. p. 117. 2). ?

Legi Venetiis ad S. Georg major. Perennis.

ZANICHELLIA *Micheli.*

(Walp. Ann. I. 766. — Knth. en. III. 123.)

1. ZANICHELLIA CYLINDROCARPA Körnicke Mss.

Florum capitulo longissime pedicellato, efoliaceo; nucibus longe cylindraceis, teretibus, dorso non elevato obtusis, rectiusculis, subsessilibus, stylo elongato filiformi terminalis.

In Australia felice leg. Ferdinand Müller n. 52 (Hb. Berolin.). — Zanichellia Preissii Ferd. Müller in pl. exsicc. ab ipso collect., nec Lehmann. — Caulis in aqua fluitans, tenuissimus, reliquis hujus generis speciebus similis. Florum capitula demum pedicello 2—5 lineas longo stipitata, basi bracteis (2?) sed non foliis cincta. Nuces 1—3, flavescentes, nitidae, pluries longae quam latae, fere 1 lineam longae et circiter ¼ lineam latae. Styli tenues, longitudine nucem aequantes, versus apicem in stigma majusculum ampliati. — Differt a Zanichellia Preissii Lehm. nucibus flavescentibus (non brunneis), longioribus et pro ratione angustioribus (in Z. Preissii Lehm.) nuces, quum longitudine ½ lineam parum superent et latitudine ½ lineam aequent, duplo non sexies longiores quam latae sunt); florum capitulo efoliaceo (non praeter bracteas foliis cincto). A reliquis speciebus florum capitulo longe pedicellato, nucibus teretibus, notis aliis dignoscitur.

Ordo VIII. JUNCAGINACEAE *Lindl.*

(Knth. III. 141. 593. — Walp. Ann. III. 506.)

MAUNDIA *F. Müller.*

Fragm. phytogr. 1858. p. 22.

Flores hermaphroditi. Sepala 2—4 squamea persistentia. Antherae 8—12 disco irregulari stipitem brevissimum germinis ambienti adnatae uniloculares extrorsum longitudinaliter dehiscentes. Germina 3—4 angulo interiore connata. Styli nulli. Stigmata linearia verticem germinum marginantia glabra, carpidia 3—4 monosperma apice tantum disjuncta et subrostrata, dorso costis duabus marginata. Semen ex apice loculi pendulum cylindraceum.

Herba erecta, paludes Australiae orientalis subtropicae incolens, glabra, Triglochinum majorum facie, radice ramosa fibrosa, foliis paene semiteretibus, scapis monostachyis.

Genus hinc Triglochin et Cycnogetonem (cui Triglochin dubium R. Br. pertinet), inde Aponogetonem et Ouvirandram attingens, suavi memoriae Joannis Maund, M. D., viri benignitate et doctrina praestantis, scientiae et amicis suis numerosis nunc praematura morte erepti, pia mente sacratum.

1. MAUNDIA TRIGLOCHINOIDES F. Müll. l. c. — In paludibus prope Durando, originem versus fluvii Brisbane. Hill & Mueller. — Herba ulnaris v. paucipedalis. Folia longitudinem scapi subaequantia, semunciam circiter lata supra leniter, subtus valde convexa, apicem versus compresso-trigona. Scapi aphylli. Spicae multiflorae 2—4'' longae, floribus demum remotiusculis. Sepala carnosa subrotunda breviter unguiculata circiter 1''' longa, duo laterali-infera duo altera laterali supera, sed frequenter obliterata. Antherae ochroleucae subbiseriatae ½''' longae, breviter acuminatae. Fructus sessiles circiter 4''' longi, alis dorsalibus angustis incurvis basi breviter in angulum carpidia jungentem productis. Semina matura hucusque ignota.

TRIGLOCHIN *L.*

(Knth. en. III. 142. 393. — Walp. Ann. III. 506.)

1. TRIGLOCHIN MUCRONATUM R. Br. l. c. p. 343. — Sonder in Linn. XXVIII. p. 224. — Rivolibay (Dr. F. Müller).

T. Neesii Endl.! Plant. Preiss. II. p. 54. est forma T. mucronati R. Br. in solo arenoso enata, cujus folia tenuiora sunt; carpella non differunt. — T. *racemosum* Endl.! l. c. est status nondum evolutus Antherici semibarbati R. Br.!

CYCNOGETON
Endl. gen. suppl. I. 1664!

1. CYCNOGETON HUEGELII Endl. Iconogr. t. 73. — In rivis Gawler et Tenuuda, Nov., Dec. (Dr. Behr); in fluvio Torrens, Nov., nec non in flumine Yarra et paludibus adjacentibus (Dr. F. Müller).

„Folia fluitantia, spicae emersae."

Scapus 2—3-pedalia. Folia $\frac{1}{2}$—1 poll. lata. Spica florifera 2—3-pollicaris, fructifera racemosa spithamaea. Nuculae ut in sequente saepe subspiraliter tortae.

2. CYCNOGETON LINEARE Sond. in Linn. l. c. p. 225.

Radice tuberosa, tuberibus pedicellatis, foliis linearibus scapum aequantibus, spica florigera multiflora, fructifera racemosa laxa, pedicellis nuculas compressas falcatas subaequantibus, stylis demum recurvis intus stigmatosis.

Triglochin lineare Endl.! in Pl. Preiss. II. p. 54.

In stagnis et locis inundatis rivum Plenty-creek versus (Dr. F. Müller); Van Diemensland (Stuart). — Tubera minora pisum aequantia, majora magnitudine nucis avellanae. Vaginae laceratae. Folia scapum aequantia, in nonnullis speciminibus longiora, in aliis breviora, a basi plana, 1—1½ lin. lata. Scapus pedalis vel altior, teretiusculus. Spica florifera 1—2-pollicaris, floribus approximatis, sessilibus, demum remotiusculis, breve pedicellatis. Perigonii foliola 6, suborbicularia, circ. ¼ lin. alta. Antherae posticae, subsessiles, loculis oblongis. Ovaria 6, libera, sessilia, compressa, subfalcata, dorso convexa. Stylus recurvus, latere interiore stigmatosus. Nuculae (semimaturae) circ. 1½ lin longae (quam in C. Huegelii dimidio minores), glabrae, pedicello aequilongo vel subbreviori, patulo, ebracteato insidentes.

Ordo IX. ALISMACEAE *L. C. Rich.*

(Knth. en. III. 146. — Walp. Ann. III. 506.)

BALDELLIA *Parl.*
Parlatore nuovi generi e spec. di piante monocotyled. 1854 p. 57.

Alismae spec. Linn. sp. pl. p. 487 et auctor. Flores ☿. Perig. 6-phyllum, phyllis exteriorib. calycinis minorib. persistentib., interiorib. corollinis deciduis. Stam. 6, per paria phyllis perigonii interioribus opposita hypogyna. Filam. subulata subadscendentia. Antherae ellipticae, ap. emarginatae, b. bifida affixae erectae biloculares, loculis subdiscretis, latere secund. longitud. dehiscentibus. Pollen sphaericum, subangulatum. Ovaria plurima, supra receptaculum globosum capitato-congesta, distincta, 1-locularia 1-ovulata. Ovulum basilare campylotropum. Styl. terminalis brevissimus c. ovario continuus persistens. Stigma simplex, superne et introrsum papillosum. Carpidia tot quot ovaria, capitato-congesta, distincta, laterib. concava, facie ventrali canaliculata, ap. stylo persistente rostellata dorso tricostata, subcoriacea, unilocularia, monosperma. Semen basilare, erectum, uniensato-complicatum. Testa membranacea, tenuis. Embryo exalbuminosus, homotropus, extremitate radiculari infera.

1. BALDELLIA RANUNCULOIDES Parl. l. c.

Alisma ranunculoides Linn. l. c. et auctor.

Hab. In locis paludosis inundatis et in fossis in aqua lente fluente. A Suecia usque ad Neapolin, in Africa bor., in Algeria. — Fl. Junio-Julio.

ALISMA *Linn.*

(Walp. Ann. I. 769.)

Parlatore nuovi generi e specie di piante monocotyled. 1854 p. 58.

1. ALISMA ACANTHOCARPUM Ferd. Muell. — Fragm. phytogr. 1858 p. 25.

Petiolis articulatis folio multo longioribus, foliis ovato-cordatis obtusis, sinu baseos angustissimo, paniculae ramis subangulatis, bracteolis lanceolatis acuminatis, carpidiis 2—10 magnis spinosis, siccis dorso indistincte quadricostatis.

In stagnis ad flumen Victoriae ejus ostium versus. Herba erecta 2—4'. Scapus teres inferne angulatus superne striatus. Petioli inferne teretes superne teretiusculi striati. Vaginae hyalino-membranaceae integerrimae. Folia pleraque 3—5" longa, 13-nervia utrinque nitidula, nervis venisque subtus prominentibus, lobis obtusis. Involucri foliola demum revoluta. Petala 3 alba late ovata acuta circiter 3''' longa. Stamina 6. Filamenta alba subulata petalis breviora. Antherae ½''' longae ovatae dorsifixae virides. Pollen ochroleucum. Styli subulato-setacei circiter lineam longi. Carpidia ovato-reniformia, spinis duabus apicali-lateralibus conicis patentibus, 2—3 brevioribus dorsalibus inaequalibus armata.

2. ALISMA OLIGOCOCCUM F. Muell. l. c.

Petiolis inarticulatis folio parum longioribus, foliis cordatis obtusis, sinu baseos angusto, paniculae ramis acute angulatis, bracteolis lanceolato-subulatis, carpidiis binis vel varius pluribus inermibus, siccis dorso obscure quadricostatis et minutim tuberculatis.

In paludibus prope Moreton Bay. W. Hill. Ad flumen Victoriae ejus originem versus; in vicinia sinus Gulf of Carpentaria. — Praecedenti propinqua.

3. ALISMA ARCUATUM, Michalet, Bullet. de l. soc. bot. de Fr. I. p. 311. (an varietas ?)

Ordo X. BUTOMEAE *L. C. Rich.*

(Knth. en. III. 163. — Walp. Ann. I. 769.)

VESPUCCIA *Parl.*

Parlatore, nuovi generi e specie di piante monocotyled. 1854. p. 55.

Stratiotidis spec. Willd.
Limnocharis spec. C. L. Rich.
Hydrocleis spec. Kunth enum. III. p. 166.

Perig. hexaphyllum, phyllis exterioribus minoribus, calycinis, subcoriaceis, persistentibus, interiorib. amplis, petaloideis, cito marcescentib. Stam. hypog., numerosa, exteriora ananthera, patenti-subradiata, interiora fertilia, erecta. Filam. plana, subulata, exteriora longiora et angustiora subulato-acuminata. Anth. angustae lin., extrorsae, b. bifida affixae erectae biloculares, loculis connexivo anguste lineari c. filamento continuo adnatis, latere secund. longitud. dehiscentibus. Pollen

minutissimum, sphaericum, laeve. Ovaria 6, verticillata, perigonii phyllis opposita distincta 1-locularia. Ovula creberr., placentâ reticulata parietem dorso et ap. excepto occupante affixa, ovoidea, leviter curvata, subadscendentia, anatropa. Styli continui distincti, superne recurvi, ap. et paulo introrsum stigmatiferi. Stigma subinfundibuliforme. Carpidia 6, verticillata membranacea oblonga, stylo persistente rostrata, 1-locularia, polysperma, sutura ventrali dehiscentia. Sem. minuta, lin-oblonga, testa .... Embryo .....

1. VESPUCCIA HUMBOLDTII Parl. l. c.
Stratiotes nymphaeoides Willd. — *Limnocharis Humboldtii* C. L. Richard. — *Hydrocleis Humboldtii* Endl. in Kunth enum. III. p. 166.

Ordo XI. HYDROCHARACEAE *Lindl.*

(Endl. gen. pl. p. 160. Suppl. III. p. 59. — Walp. Ann. III. 507.)

Caspary: Ueber die *Hydrilleen* (*Anacharideae* Endl.), in d. Berl. Abhdlng. d. Acad. 1857 Jan.

Tribus *HYDRILLEAE* Casp.
(*ANACHARIDEAE* Endl.)

Germen uniloculare. Stigmata tria. Caulis elongatus, internodiis longitudine se fere aequantibus; stolones nulli. Folia parva, verticillata, rarius sparsa. Plantae submersae.

GENERA: HYDRILLA, ELODEA, LAGAROSIPHON.

HYDRILLA *Richard.*

Mém. de l'Instit. année 1811 (mém. lu le 14. Jan. 1811, publiée 1812) I. 61.

Serpicula Linn. fil. Suppl. 1781. p. 416. (ex parte). Roxburgh Pl. corom. 1798. II. 34. Willd. sp. pl. 1805. IV. I. p. 329 (ex parte).
Hottonia Willd. sp. pl. 1797. I. 2. p. 814.
Epigynanthus Blume in litt. ad Nees ab Esenb. Fl. 1825. p. 679. Endl. gen. 1664.
Hydrospondylus Hasskarl Fl. 1842. Beiblatt II. 33.

Flores monoici (vel dioici?). Masc. spatha sessilis, subglobosa, in vertice bivalve rumpens, muricata, uniflora. Flos breviter pedicellatus. „Sepala tria, obovata; petala tria, linearia; stamina tria; filamenta brevia, filiformia; antherae subgloboso-reniformes" (Roxb. Hassk.). Fem. Spatha sessilis, tubulosa, ore bidentato, uniflora. Flos sessilis. Tubus perianthii filiformis, elongatus. Sepala tria, obovato-oblonga; petala tria, minora, lineari-obovata. „Stylus longissimus in tubo perigonii inclusus, nec adnatus, capillaris" (Hassk.). Stigmata tria, filiformia, tertiam partem sepalorum aequantia. Germen inferum, lineari-oblongum, uniloculare; placentae parietales tres. Gemmulae 2—7, inferiores pendulae, superiores adscendentes; vel rarius omnes pendulae, anatropae. „Fructus bacca (?) cylindrica, unilocularis, gelatina impleta; semina pauca („3—7" Rich.,

„5" Hassk.), superiora erecta, inferiora inversa. **Embryum exalbuminosum, rectum"** (Rich.). — Herba submersa. Caulis teres, cellularum conductricum fasciculo centrali unico, ductuum aëreorum cyclo unico vel duobus, inter ductus aëreos et cuticulam stratis cellularum unico — quatuor interpositis. Folia verticillata, bina — octona, sessilia, uninervia, dentata, dentibus cellula apicali maxima, brunnea, antrorsum curvata, utrinque 8—31, cellulis 3—8 supra marginem prominentibus; cellulae marginales chlorophyllum gerentes, nec vel paululum tantum longiores et tenuiores quam cellulae disci. Stipulae binae, intrafoliaceae, oblongae vel oblongo-lanceolatae, margine papillis linearibus 5—9. Folium basale rami unicum, amplexicaule, ovatum, nervo medio unico, dorso ad axim primarium verso. Radices filiformes, axillares, saepe fasciculatae. — Contentus cellularum rotat. Flores masc. denique a pedicello soluti ad superficiem aquae adscendunt et casu adiuti foemineos foecundant. Hiemem in statu gemmarum oblongarum bulbilliformium peragit.

Patria: Europa orientalis, Asia (Indiae ambae orient., China, Java), Nova Hollandia Africa (Insula Mauritii). — Species unica.

1. **HYDRILLA VERTICILLATA** Char. spec. idem ac. gen.

Hydrilla dentata Casp. Bot. Zeit. 1854. p. 56. Garcke Fl. von Nord- und Mitteldeutschl. Edit. 3. p. 312.

α. *Roxburghii*, internodiis modice c. 3''' longis, foliis oblongo-lanceolatis v. oblongis, 3—5''' longis, ¾—1½''' latis, abruptius in apicem acutum contractis; lat.: long. = 1 : 3—5; verticillis 3—5-, plerumque 4-foliis.

Serpicula verticillata Lin. fil. s. 1781. l. c. — Willd. sp. pl. IV. I. p. 329. herb. Willd. N. 17363. fol. 4. (ex parte) — Roxburgh Pl. corom. II. 34. Fl. indic. III. 378. — *Hottonia serrata* Willd. a. 1797. l. c. — *Vallisneria verticillata* Roxburgh Fl. indic. III. 751. — *Hydrilla ovalifolia* Richard l. c. p. 9. (ex parte); Miquel Fl. Ind. Bat. 1856. III. p. 235. — *Hydrilla Wigthii* Planch. Ann. sc. nat. III. ser. a. 1849. tom. XI. p. 79. (ex parte).

Hab. Ambae Ind. orient., Java, China, Nova Hollandia, Insula Mauritii.

Vidi specimina originalia Linnaei fil. in herb. Lin. in h. soc. Lin. Lond. — Vidi etiam plantam in h. Berolin. (h. Willd. N. 17363. fol. 4. — Java, Zollinger exs. N. 125 b — Coromandel, Macé — Ceylon, Thwaites); h. Mus. Par. (Java, Zollinger exs. N. 125 b); in h. Deless. (Ind. orient., Roxburgh — Isle de France, Néraud — Isle de France, Perrottet — Pondichery, Perrottet — h. Wallich plant. Wallichii catal. N. 5048. ex parte); h. Mus. Brit. (Ind. orient., Koenig — Ind. orient., Soc. unit. fratr.); h. soc. Lin. Lond. (h. Wallich plant. Wallichii cat. Nr. 5048.); h. Hooker (Bhein Tal, Kumaon, 4400' above the sea, Strachey et Winterbottom — Assam — Concan, Dr. Stocks — Taovi, Bengal inferior, Dr. Thompson — Behar, Bengal, Hook. fil. et Thomp. — Iheels, Hook. fil. et Thomps. — Maradabad — Lahore Septbr. 1846. Thomps. — Ceylon Thwaites C. P. 2310. — Ind. orient., Wight; Hydrilla Wigthii Planch. spec. orig. — Kashmir, Thomps. — Nova Hollandia in fluvio Murrey, Dr. Ferd. Müller sub nomine Udorae australis Ferd. Müll.).

β. *brevifolia*, internodiis modice usque ad 6—9½''' longis, foliis brevioribus, ovalibus — oblongo-lanceolatis, 2—4½''' longis, et 1—1¼''' latis; lat.: long. = 1 : 1⅓—1½.

Hydrilla ovalifolia Rich. l. c. (ex parte); Chatin Anat. comp. 1856. p. 22. t. 9, fig. 1—3.

Hab. Ind. orient. V. s. in h. Berol. (h. Willd. Nr. 17636. fol. 4. [ex parte] — Ind. or., Klein); h. Mus. Par. (Kauser infer., Dr. Royle); h. soc. Lin. Lond. (h. Wallich Nr. 5048. lit. A.); h. Hook. (Scinde, Stocks); h. Deless. (Coromandel, Bélanger exs. Nr. 93).

γ. *tenuis*, internodiis modice longis, caule tenuissimo, foliis lanceolato-linearibus, tenerrimis, 4—4½''' longis, ½—¾''' latis, lat. . = 1 : 6—7.

Hab. Ind. orient. V. s. in h. Berol. (Hottonia. Ind. orient. sine indicatione collectoris); h. Hook. (Iheels, Hook. fil. et Thomps. formam transitum faciens ad var. longifoliam).

δ. *gracilis*, internodiis longioribus, usque ad 3'' longis, foliis ovalibus — lanceolato-linearibus, apice plerumque rectis vel recurvatis, plus minus attenuatis, 2—8''' longis, ¾—1¾''' latis, lat.: long. = 1 : 1½—8, verticillis 3, 5, 7, 8 rarius 2, 4 et 6 foliis.

Serpicula verticillata Rostk. et Schmidt Fl. sed. 370; Homann Fl. v. Pommern III. 24. — *Cauliniae* sp. v. sp. nov. C. Sprengel syst. veget. IV. II. 25. — *Udora occidentalis* Koch syn. 1837. Edit. 1. p. 669; Schmidt Fl. v. Pommern u. Rügen 238; Bluff, N. ab. E. et Schauer Comp. 724. — *Udora lithuanica* Reichenb. fl. exc. p. 139. — *Udora pomeranica* Reichenb. in Fl. exsic. Germ. Nr. 2142; Icon. fl. Germ. et Helv. 1845. VII. p. 31. t. 59. fig. 104, — *Anacharis pomeranica* Petermann Deutschl. Fl. 1849. p. 529. t. 82. fig. 650. — *Hydrilla dentata* var. *pomeranica* Casp. Bot. Zeit. 1853 p. 805.

Hab. Europa orient. et Ind. orient. V. v. e lacu Dammensi pr. Stettin a cl. Seehaus missam; v. s. in h. Lipsiens. (e lacu Swinta pr. Wilnam, Besser); h. Hook. (Lahore. Thomps. — Iheels Bengal, Hook. fil. et Thomps., formam transitum ad η. longifoliam facientem): h. Mus. Brit. (Ind. orient., Koenig): h. Deless. (h. Wallich Nr. 5048. lit. A. ex parte); h. soc. Lin. Lond. (h. Wallich. l. c.)

ε. *crispa*, internodiis brevissimis, 1''' haud excedentibus, foliis ovalibus — lanceolato-linearibus, apice plerumque recurvatis vel subcircinato-revolutis, in acumen tenue productis, rarius rectis, breviter acuminatis, plerumque margine crispis, textura firmiori, 2—6''' longis, ¾—1''' latis, lat.: long. = 1 : 2—7; verticillis 3—5, saepius 4, rarius 6—7 foliis.

Udora verticillata Gorski (non Sprengel) in Eichwald Skizze von Lithau. 1830. p. 127; Besser Flora 1832. Beiblatt I. 12. — *Hydora lithuanica* Andrzejowski Ms. ex Besser l. c.; Besser Ms. 1831. (in sched. spec. herb. univ. Lips.). — *Udora lithuanica* Besser Ms. ex Koch Syn. 1837. Edit. 1. 669; Reichenbach Icon. 1845. VII. p. 31. t. 59. fig. 106; v. Ledebour Fl. ross. fasc. 12. p. 46. — *Hydrilla dentata* ε. *lithuanica* Casp. Ms.

Hab. Europ. orient., Ind. or. et China. V. s. plantam lithuanicam in h. Vindob. (Gorski), h. Reichenb. fil. (Gorski), h. univ. Lips. (Besser; Gorski), h. Jacq. Gay (Besser). — V. s. in h. Casp. (in lacu parvo Selment prope Lyck Borussiae orient. a C. Sanio inventam); in h. Hooker (Scinde, Lake Munchar, Stocks); h. Mus. Brit. (China, provincia Kiangang, G. Staunton).

ζ. *inconsistens*, internodiis usque ad 22''' longis, brevibus longissima irregulariter sequentibus; foliis crispatis, apice sensim attenuatis, magnitudine eodem in specimine valde diversis, 1—8''' longis, ½''' vel paulo plus latis, lat. : long. = 1 : 1—3½—8.

Serpicula verticillata Willd. (ex parte) fide herb. Willd. Nr. 17363. fol. 1 et 2.

Hab. Ind. orient., Ceylon. V. s. in h. Berol. (h. Willd.) et in herb. Hookeri (Ceylon. Thwaites C. P. 2309).

η. *longifolia*, internodiis modice longis, foliis longissimis, 2—10''' longis („0,3—1,2''' Hassk.) et ½—¾''' latis, lat.: long. = 1 : 3—20, apice sensim attenuatis, acutis.

Hydrospondylus submersus Hassk. Fl. 1842 Beiblatt II. 33; Endl. Gen. suppl. III. p. 59. — *Epigynanthus Blumei* Hassk. Cat. hort. bot. Bogoriensis 1844. p. 53. — *Hydrilla naiadifolia* Zoll. et Moritzi system. Verzeichniss 1845—46. p. 91; Miquel Fl. Ind. Bat. 1856. III. p. 234. — *Hydrilla angustifolia* Hassk. Pl. iav. 1848. p. 117; Blume Mus. botan. Lugd. batavum Nr. 6. 1. Junii 1849. p. 82; Chatin l. c. p. 23. t. 9. fig. 7—9.

Hab. Java et Ceylon. V. s. Zolling. exsicc. Nr. 125, in h. Berol., Mus. Par. et Deless. et in h. Hook.; Nr. 2305. C. P. Ceylon, Thwaites.

ELODEA Richard.

(Ex Mém. de l'Institut l. c. p. 4. in Michaux Fl. bor. americ. 1803. I. p. 20.) ch. ref.

Elodes est nomen generis cujusdam Hypericinearum ab Adansonio (Fam. a. *1763.* II. 444). datum, non Elodea, ut Nuttall (genera of North-Am. plants II. 242) false asserit, hinc nomen „Elodes" Adans. generi illi, quod Nuttall Elodeam vocavit, restituendum. Pro nomine „Elodes" a cl. Spach 1836. (Suit. à Buff. V. 363) dato propono nomen „Tripentas". Elodea Jack (Hook. Journ. of bot. 1834. I. 371. ff.) synonyma est cum „Tridesmos" Hook. et Arnott (Bot. of Beech. voy. p. 172) secundum Hookerum (Journ. of bot. l. c. p. 372).

Elodea et *Anacharis* Richard in Michx. Fl. bor. am. l. c. 1803 et in Mém. de l'Institut l. c. 1812 p. 68 et 69. — *Udora* et *Anacharis* Endl. gen. 1836—40. 1206 et 7; Meisner gen. 1836—43. I. 366. II. 284; Chatin Anat. comp. 1856. p. 24. 26. — *Apalanche*, *Anacharis* et *Egeria* Planchon Ann. and Mag. of nat. hist. 1848. p. 47 ff.; Ann. d. sc. nat. III. ser. XI. tom. 1849. p. 73 ss.

Flores vel polygami, vel dioici, vel hermaphroditi, singuli — terni e spatha axillari, sessili, ovata vel lineari, tubulosa, ore bilobo, lobis deltoidibus erumpentes. Flos masc. vel sessilis, tempore foecundationis solutus et libere natans, vel longe tubo perianthii filiformi pedicellatus, non solutus. Sepala tria, ovalia; petala tria, subcircularia — ovato-oblonga; stamina 3, 6, 9 cum petalis et inter se alternantia. Antherae oblongae, filamento vel brevissimo, vel antheram 1—1½ longitudine superanti. Rudimenta stigmatum trium rariora. Fl. fem. germen inferum, oblongo-lineare, uniloculare, placentis parietalibus tribus; gemmulae 3—21, orthotropae (non „anatropae" Endl.), micropyle sursum versa, vel sessiles, vel funiculo brevi fultae, integumentis duobus (non „unico" Chat.). Tubus perianthii elongatus, filiformis; sep. et pet. ut in fl. masc., tamen minora. Rudimenta filiformia staminum sterilium tria vel nulla. Stylus unus. Stigmata tria, linearia, apice incrassata, biloba vel emarginata. Fl. hermaphroditus ut femineus, tamen antheris 3, 6 (et ultra?). Fructus capsula (bacca?) „oblonga, subtrigona, cavitate simplici, oligosperma. Semina cylindrico-oblonga. Embryum exalbuminosum, rectum, inversum" (Rich.).

Herbae aquaticae, perennes, submersae. Caulis fasciculo centrali cellularum conductricum unico. Radices adventitiae filiformes, simplices, e nodis orientes. Folia deltoidea, ovalia, oblonga vel linearia, verticillata, sessilia, medio nervo unico e cellulis conductricibus formato, serrulata, serraturis minutis, rectis, antrorsum versis, cellula unica supra marginem prominentibus, vel rarissime dentata. Ad basin ramorum folia basalia duo, lateralia, deltoidea, haud amplexicaulia. Stipulae binae, intrafoliaceae, minutae, haud coloratae, ovatae vel suborbiculares, integerrimae. — Patria America boreal. et austr. temperata et tropica. In Angliam, Scotiam et Hiberniam species boreali-americana immigravit.

Inquirendum de natura styli, quem autores vel cum perigonii tubo connatum (Endl., Bab., Hook. et Arnott) vel liberum (Humb. et Bonpl. in Elod. granat.) referunt. Inquirendum de speciebus flore hermaphrodito, num flores dioici et polygami exstent; de speciebus flore dioico, num flores hermaphroditi inveniantur; de floribus Elodeae canadensis, num aliis in regionibus tantum dioici, nec hermaphroditi (e. g. prope St. Louis), aliis in regionibus flores hermaphroditi, nec foeminei, nec masculi (e. g. prope New York) reperiantur. Inquirendum tum de fructu fere omnium specierum et denique in plantis vivis de vasis spiralibus, quum mihi contigerit ea sub puncto vegetationis in Elodeae canadensis anglicae caule invenire.

1. ELODEA CANADENSIS Rich. ch. ref.:

Floribus polygamis; masculo antheris 9, in spatha uniflora ovata vel ovato-elliptica, tempore foecundationis soluto; flore hermaphrodito antheris 3, 6 (vel ultra?); petalis tribus, sepala tria longitudine subaequantibus vel paululum superantibus; antheris flavis; filamentis in fl. masc. saepius subnullis, in flore hermaphrodito antheram longitudine subaequantibus; stigmatibus petala fere bis superantibus; foliis lineari-lanceolatis, plus minus versus apicem attenuatis, acutis, vel rotundato-acutis, 4—6‴ longis, $^1/_2$—$^3/_4$‴ latis, serrulatis, ternis, rarius quaternis; seriebus 2—4 marginalibus cellularum folii $1^1/_2$—2 longitudine cellulas disci superantibus et chlorophyllo pauperioribus.

Planta hermaphrodita:

Elodea canadensis Rich. in Michx. l. c. 1803. (Triandria Monog.), Roem. et Schult. Lin. syst. II. 874. — *Serpicula verticillata* Mühlenb. Catal. 1813. p. 84. (ex Darlingt.). — *Serpicula occidentalis* Pursh Fl. Am. sept. 1814. I. p. 21 et 33. — *Serpicula canadensis* Eaton Man. 1818. p. 336. (ex Darlingt.).

Hab. Amer. bor. V. s. in h. Mus. Par. (spec. orig. Michauxii in h. Mich. et h. Desfont.); in h. Vindob., Lipsiensi et Mus. Par. plantam in Pensylvania pr. Bethlehem a Mosero lectam; in h. Jacq. Gay (Pensylvania, Lecha, Moser); in h. Lipsiens. (Amer. bor., Schweinitz).

Planta dioica:

Udora canadensis Nuttall gen. of North-Amer. pl. 1818. II. 242. (Dioecia Enneandria); Beck bot. of north. and mid. states 1833. p. 342; Darlington Fl. cestrica 1837. p. 570. — *Udora verticillata* (ex parte) Sprengel Lin. syst. 1825. I. p. 170; Hooker fl. bor. amer. 1840. II. p. 193; Reichenbach Icon. fl. Germ. et Helv. 1845. VII. t. 59. fig. 105. — *Udora verticillata* (?) *minor* Engelmann Ms. — *Udora occidentalis* (ex parte) Koch syn. 1837. Ed. 1. 669; Bluff, N. ab E., Schauer Comp. 1838. p. 724 et 725). — *Anacharis Nuttalii* Planchon Ann. and Mag. of nat. hist. II. ser. 1848. I. p. 85; Ann. d. sc. nat. III. ser. 1849. XI. p. 74. — *Anacharis Alsinastrum* Babington Ann. and Mag. of nat. hist. II. ser. 1848. I. p. 85; Ann. sc. nat. III. ser. 1849. XI. p. 66; Babington Manual 1851. p. 304; Eng. Bot.; Hooker and Arnott brit. Fl. 6. ed. 1850. p. 401. — Marshall the new waterweed 1852.

Hab. Amer. bor. e. g. prope St. Louis et Newyork; pl. foeminea in Angliam, Scotiam et Hiberniam immigravit. V. v. pl. anglicam mihi a cl. Edw. T. Bennett, Brockham Logde, Betchworth, Surrey missam et in hort bot. Berol. cultam. V. s. in h. Hooker (Newyork, Torrey — Am. bor., Goldie) et plantam ab Engelmanno prope St. Louis lectam in h. Al. Braun, in h. r. Berol. et Lipsiens.

Planta polygama:

Udora canadensis Torrey Fl. of the state of Newyork 1843. II. 264. — *Anacharis canadensis* Asa Gray Manual of the botany of the north. unit. states. 2. ed. 1856. p. 441.

Flores polygami nondum uno eodemque loco lecti.

? 2. ELODEA LATIFOLIA Casp. l. c.

Foliis superioribus acutis, non acuminatis, oblongis, ternis, omnium Hydrillearum latissimis, $1^1/_2$—2‴ latis, 3—$3^1/_2$‴ longis, serrulatis; stipulis suborbicularibus, margine nonnullis cellulis brunnescentibus hemisphaerice prominentibus.

Flores ignoti. An forma Elod. canadensis? — V. s. in h. Vindob. et Lipsiens. a Schweinitzio in Amer. bor. lectam.

3. ELODEA SCHWEINITZII Casp. l. c.

Germine pedicellato, pedicello filiformi 5—7''' longo, ceterum ut Elodea canadensis.

Apalanche Schweinitzii Planchon II. cc. 1848 et 1849.

Imperfecte nota; veresimiliter forma Elodeae canadensis. — V. s. specimin. origin. in h. Hook. a Schweinitzio in Amer. bor. (veresimiliter in Pensylvania pr. Bethlem) lecta.

? 4. ELODEA PLANCHONII Casp. l. c.

Flore masculo petalis nullis, sepalis tribus; herba Elodeae canadensis.

Anacharis canadensis Planchon II. cc. 1848 et 1849. — *Anacharis canadensis* Chatin anat. comp. 1856. p. 25. veresimiliter ad Elod. canadensem Rich. et Mich. pertinet; nam in herbariis Lutetiae Parisiorum Anach. canad. Planch. non vidi.

Imperfecte nota. An forma El. canadensis? — Hab. Amer. bor. — V. s. spec. orig. in h. Hookeri asservata a Drummondio in Suskatshawan et a Cleyhornio in Canada lecta.

5. ELODEA CHILENSIS Casp. l. c.

Floribus dioicis, masculo antheris 3, 6; 9 in spatha uniflora, tubuloso-cylindrica, usque ad 9''' longa, tubo perigonii longissimo (8—48''' longo) pedicellato, nec tempore foecundationis soluto; antheris flavis, subsessilibus, post emissionem pollinis petaloideo-expansis; stigmatibus petala fere duplo longitudine superantibus; foliis latioribus, oblongo-linearibus, apice rotundato-acutatis, usque ad 7''' longis et $1^3/_4$''' latis, serrulatis, ternis, rarius quaternis, cellulis folii marginalibus longitudine fere illas disci aequantibus, etiam seriei extimae chlorophyllo haud omnino destitutis.

Diplandra Potamogeton Bertero in Mercurio chileno (quo anno?) p. 612. (ex Cl. Gay). — *Anacharis chilensis* Planchon II. cc. 1848 et 49. — Cl. Gay Historia di Chili 1849. V. 422. — Chat. Anat. comp. 1856. p. 24. t. 10. fig. 1—3' (fig. 3' male). — *Anacharis Matthewsii* Planchon II. cc. 1848 et 1849. (Fl. masc. stam. 9).

Hab. Amer. aust. Chili, Bolivia, Peru. V. specim. orig. Diplandrae Potamogetonis Bert. in Chili lectae in h. Berol. et Mus. Par. cum adnotationibus a Bertero conscriptis, — Chili, in incilibus prope Maypeu et Colchagua, Cl. Gay cum adnotationibus in h. Mus. Par. — Bolivia, in lacu Titicaca, d'Orbigny h. Mus. Par. — Chili, Valparaiso. Cumming exsic. Nr. 636 in h. Hook. et univ. Lipsiens. — Peru, Prov. of Canta. Huamatanga, Aprili, A. Matthews exsic; Nr. 581 (Anach. Matthewsii Planch. spec. orig.) in herb. Hook.

6. ? ELODEA CALLITRICHIOIDES Casp. l. c.

Antheris coerulescentibus, subsessilibus; foliis angustioribus, lineari-lanceolatis, acutiusculis vel acutis, subito in apicem contractis vel sensim attenuatis, usque ad 6''' longis, $^1/_2$—$^2/_3$''' latis, serrulatis; ceterum ut Elodea chilensis.

Anacharis callitrichioides Richard Mém. de l'Institut l. c. 1812. p. 7. cum icon. t. 2. — Planchon II. cc. 1848. et 1849.

Imperfecte nota. An forma Elodeae chilensis? — Hab. Amer. austr. La Plata. — V. s. spec. orig. Richardi in h. Mus Par. a Commersonio prope Buenos Ayres lecta. — La Plata, Tweedie, h. Hook.

7. ELODEA GUYANENSIS Richard Mém. de l'Inst. l. c. 1812. p. 4. cum icon. t. 1.

Flore hermaphrodito; spatha uniflora; petalis $^4/_3$—2 sepala longitudine superantibus; staminibus 3, filamentis linearibus, antheram longitudine aequantibus vel bis superantibus; stigmatibus petala haud aequantibus; foliis lineari-lanceolatis, versus apicem sensim attenuatis, acutissimis, $5^1/_2$—10''' longis, $^1/_2$—$^2/_3$''' latis, serrulatis, ternis — nonis.

Elodea guyanensis Roem. et Schult. Lin. sys. 1817. II. 874. — *Udora brasiliensis*

Endl. et Mart. Fl. brasil. 1847. Fasc. VII. p. 97. — *Apalanche guyanensis* Planchon II. cc. 1848. et 49. — *Udora guyanensis* Chatin l. c. p. 26. t. 10. fig. 4—6.

var. *Dicranoides*, foliis singulis, binis, ternis, glaucescentibus, parvis, $2^1/_2$—3''' longis, $^1/_2$ latis, appressis, internodiis brevissimis.

Apalanche guyanensis var. *dicranoides* Spruce in sched. Nr. 1991. exsicc. Brasil. 1851.

Hab. Amer. austr. Brasilia, Surinam, Guyana francogall. et brit., Nova Granata. Var. in Brasil. septent. — V. s. in h. Berol. (Brasilia, Sellow), h. Vindob. (Surinam, Splitgerber — Brasilia, Piauhy, Gardner exsic. Nr. 2742 sub nomine Udorae brasiliensis Mart.); h. Hooker (Brit. Guyana, Parker. — Nova Granata, Cancana, La Paila, J. F. Holton): h. Mus. Par. (Brasilia, Tamandua, Aug. St. Hilaire Nr. 307, 1591 et 1651. — Guyana francogall. Leprieur.): h. Deless. (Guyana francog. Cayenne, Leprieur sub nomine Hydrillae najadifoliae). Var. a Spruce Dec. 1851. in Brasil. septent. inter Barcellos et San Gabriel secus fluvium Rio negro lecta in h. Mus. Par. et. h. Hook.

? 8. ELODEA GRANATENSIS Humboldt et Bonpland pl. [illegible]. 1809 II. 50. cum icon.

„Flore hermaphrodito, petalis bis vel ter sepala longitudine superantibus, antheris 3, filamento lineari, brevissimo" (ex Humb.); foliis ad basim rami sparsis, in parte superiori binis — ternis, („ad basim rami quinis — septenis, in parte superiori quindenis — septendenis" fid. Humb.).

Elodea granatensis Humb., Bonpl. et Kunth. Synop. 1825. IV. 197. — *Udora granatensis* Sprengel Lin. syst. 1827. IV. 2. p. 25. — Reichenbach Icon. 1845. VII. t. 59. — *Apalanche granatensis* Planchon II. cc. 1843 et 1849.

Imperfecte nota; veresimiliter identica cum Elodea guyanensi.

Hab. Amer. austr. Nova Granata. — V. s. spec. orig. in h. Berol. et spec. plura in h. Mus. Par.

? 9. ELODEA DENSA Casp. l. c.

Floribus inter Elodeas maximis, masc. circa 11''' diametro, dioicis (?); spatha bi — triflora; fl. masc. non solubili (?), staminibus 9, tubo perianthii filiformi ad 15''' longo, petalis sepala bis et ultra superantibus, filamento antheram $1^1/_2$ superanti; antheris oblongis, post emissionem pollinis linearibus non petaloidibus; foliis plerumque quaternis, rarius quinis, lineari-lanceolatis, apice rotundato acutatis, serrulatis, 1—$1^1/_2$ latis, usque ad 7''' longis.

Egeria densa Planchon Ann. d. sc. nat. III. ser. 1849. tom. XI. p. 80.

Fl. feminea ignotus. — Hab. Amer. austr. in ditione Platensi. — V. s. specim. originalia prope Buenos Ayres a Tweedio lecta in h. Hook.

10. ELODEA NAIAS Casp. l. c.

Floribus dioicis, spatha fl. masc. biflora; fl. masc. non solubili (?), staminibus 9, tubo perianthii filiformi 1—$1^1/_2$''' longo, petalis sepala bis et ultra superantibus, filamentis et antheris ut in Elod. densa; foliis quaternis — quinis, $2^1/_2$—$4^1/_2$''' longis, $^1/_2$—$^3/_4$''' latis, lineari-lanceolatis, acutis, patentibus, apice saepius recurvis, margine crispis vel subcrispis, dentatis, dentibus 4—9 cellulis supra marginem prominentibus.

Egeria Naias Planchon Ann. sc. ant. l. c. 1849. p. 80. — *Anacharis Hilariana* Casp. ms. in herb. Mus. Paris.

Hab. Brasil. orient. — V. s. specimina originalia in h. Hook. a Gardner in Brasilia prope Minas Geraës lecta; in h. Mus. Par. specim. a cl. Aug. St. Hilaire in Brasilia ad Capao prope Rio de S. Francisco lect. Cat. num. 1840 cum annot.

Planta mihi dubia, quam non vidi, est:

Elodea orinoccensis Rich. Mém. de l'Institut l. c. 1812. p. 75.

LAGAROSIPHON *Harvey.*

(In Hooker Journ. of bot. 1842. IV. 230. cum icon. t. 22). — Casp. l. c.

Lagarosiphon Endlicher gen. suppl. III. p. 59.

Hydrilla (ex parte) K. B. Presl Abhandlg. d. Kön. Böhm. Gesellsch. d. Wiss. 1845. III. p. 542. — Planchon (ex parte) Ann. d. sc. nat. III. ser. 1849. XI. p. 79. — Chatin (ex parte) anat. comp. 1856. p. 23.

Udora (ex parte) Hochstetter 1841 in schedula pl. exsic. Kotschyi it. Nubic. Nr. 170.

Flores dioici. Masc. Spatha sessilis, ovata, axillaris, solitaria, multiflora, floribus pedicellatis. Sep. tria, ovalia; petala tria, sepalis angustiora et breviora. Stamina 3, sepalis opposita. Filam. ananthera 3 (v. 2, v. 4), linearia, petalis opposita. Fem. Spatha sessilis, axillaris, solitaria, oblonga, uniflora. Germen inferum, uniloculare, placentis tribus parietalibus, gemmulis [illegible]—39, orthotropis, erectis, funiculis obliquis gemmulas longitudine [illegible]aequantibus; integumenta duo. Tubus perianthii filiformis, elongatus. Sepala tria, ovata; petala tria eis paululum angustiora, ovata; filam. ananthera 3 („6" Harv. Endl.). Stigmata 3, filiformia, bipartita. Fructus capsula ovata, membranacea, unilocularis, 3-polysperma. Semina erecta, cylindrica, basi funiculo coriaceo-incrassato. Embryum exalbuminosum, rectum, extremitate radiculari supera (non „infera" Harv., Endl.).

Herbae aquaticae, submersae. Caulis ramosus, fasciculo centrali cellularum conductricum unico, strato vaginali magis incrassato incluso. Vasa spiralia nulla (?). Folia sparsa, hinc inde duo vel tria eadem fere in altitudine posita, linearia, uninervia, dentata. Folia basalia ramorum duo vel tria membranacea in vaginam connata. Stipulae binae ovales, acutae, minutissimae, albidae, parenchymaticae, vasis et cellulis conductricibus destitutae, integerrimae v. apice papillis 3—4 brevibus. — Plantae Africanae.

1. LAGAROSIPHON MUSCOIDES Harvey l. c.

Foliis sensim attenuatis, acutissimis, serrulato-dentatis, 4—7½‴ longis, ½‴ latis; seriebus cellularum 4—5 marginalibus chlorophyllo destitutis; dentibus acutissimis, utrinque 43—62, angustis, curvatis et antrorsum versis, rarius rectis, cellula unica supra marginem folii prominentibus; internodiis ad 2‴ longis, plerumque brevioribus; stipulis ovalibus, sensim in apicem attenuatis, integerrimis; gemmulis 3—4.

Hydrilla Dregeana Presl l. c. — *Hydrilla muscoides* Planch. l. c. Chatin l. c.

Hab. caput bonae spec. V. s. in h. Berol., Vindob., Lipsiens., Mus. Par., Deless., Hooker a Drege (exsicc. Nr. 2267 c), Ecklon et Zeyher (exsicc. Nr. 1732) et Noveaux collectum.

2. LAGAROSIPHON CORDOFANUM Caspary l. c.

Foliis sensim attenuatis, acutissimis, dentatis, 6—11‴ longis, ½‴ latis, dentibus acutissimis, utrinque 34—44, 1—5, 6 cellulis supra marginem prominentibus, cellula apicali maxima curvata, elongata, antrorsum versa, angusta; stipulis ovatis, apice papillis 3—4 brevibus; internodiis ad 1½‴ longis, plerumque brevioribus; gemmulis 35—39.

Udora cordofana Hochstetter l. c. Chatin l. c.

Hab. Ad montem cordofanum Arasch-Cool a Kotschy lectus. — V. s. in Kotschy pl. exsicc. iter nub. Nr. 170. in h. Berol., Lipsiens., h. Jacq. Gay et Deless.

TRIANEA *) *Karsten* in Linn. XXVIII. 424.

(*Hydrocharidea* Endl. 1210. 1. Trib. II. b. Ovarium uniloculare stigmata 6.)

Flores diclines in eadem stirpe vel dioici. Masculini spatha pedunculum brevem terminans, floribus pedicellatis, pedicellis inaequalibus, bracteatis. Perigonium sexpartitum marcescens, laciniis calycinis oblongis, firmioribus, corollinis lanceolatis margine revoluto. Stamina 6, biseriata interiora paullo minora, filamenta brevia basi connata; antherae basifixae, cordatae, acutae, longitudinaliter birimosae; pollen globosum glabrum; ovarii rudimentum nullum. — Feminini pedunculis nudis bractea solitaria fultis. Perigonii superi limbus trifidus, laciniae sepalis maris similes, deciduae. Stamina sterilia sex, per paria laciniis perigonialibus opposita vel tria iisdem alterna. Ovarium uniloculare; ovula plurima, placentis parietalibus sex, vix conspicuis affixa, horizontalia, bichlamydea, atropa; stigmata sex profunde bipartita glanduloso-hirta, decidua. Fructus —?

1. TRIANEA BOGOTENSIS Karst. l. c. — Herba perennis acaulis stolonifera in planitiei Bogotanae aquis lente fluentibus obvia; folia conferta, longe petiolata, oblonga nervosa crassa plano-convexa, subtus spongioso-reticulata; petiolo basi dilatata subvaginanti ligula hyalina instructa; flores masculini pauci (tres) longe pedicellati in umbellam parvam dispositi; bracteae hyalinae pedunculos amplectentes; pedunculi erecti longiusculi foliis breviores; perigonium viridescens, sepala rubro-nervosa.

Tribus *VALLISNERIEAE.*

(Endl. gen. pl. p. 161.)

VALLISNERIA *Micheli.*

Charact. emend.: Parlatore, Bullet. de l. soc. bot. de Fr. II. p. 303.

Fl. dioici masc. (Vallisnerioides Mich.). Spatha scapum breviss. terminans, ovata, bivalvis, valvis connat., ab ap. erumpentib., caduca multiflora., Fl. breviss. pedicellati, supra receptac. conicum spadiciforme congesti, c. pedicellis articulati et ab illis mox et facile separabile. Perigon. colorat., tripartit., laciniis obovatis, concavis, obtusiss., aestiv. valvatis. Stam. 2, perigonii laciniis ima b. inserta iisq. alterna. Fil. filiformia. Anth. subglobosae, b. fixae, locul. contiguis. Pollen laeve, globos. Staminodium 1, breviss., laciniis perigonii alternum. Foemin.: Spatha scapum longiss. filiformem, spiralem terminans, tubulosa, ap. bifido-lacera. Fl. solitarius sessilis. Perig. calycini tubus c. ovario adnatus, limbo 3-partitus, laciniis aequalib., ovatis, concavis, obtusiusculis. Staminodia 3, linear. brevia, perig. phyllis opposita. Ovarium perigonii tubo adnatum, cylindricum 1-loc. Ovula plurima, ovalia adscendentia, orthotropa! funiculo longiusc. Stylus brevis, crassus. Stigmata 3, maxima, ovalia, profunde bifida, int. pubescentia. Fr. subbaccatus, cylindricus, perigonii limbo coronatus, 1-locularis. Semina plurima, cylindrica, ascendentia v. suberecta, testa membranac. fusca, longitudinalit. striata. Embryo semini conformis, exalbuminosus, extremitate radiculari infera, hilo proxima.

1. VALLISNERIA SPIRALIS Lin. — Chatin sur les fleurs males du Vallisneria spir., Bull. de la soc. bot. de Fr. II. p. 293.

*) Genus in memoriam socii mei in Flora Novo-Granatensi mea collaborata „Dr. J. Triana" conditum.

Subclassis III. RHIZANTHEAE.

Ordo XII. BALANOPHOREAE *L. C. Rich.*

(Walp. Ann. III. 511.)

Goeppert Beitrag z. Kenntniss d. Balanophoren (Kruitk. Arch. 1851). — Nova acta Acad. Caesar. Leop.

Weddell, organe reproducteur des Balanophorées et des Rafflesiacées, Ann. sc. nat. III. tom. 14. p. 166—187. tab 8—11.

SARNA *Karst.* in Linn. XXVIII.

gen. nov. Rhizanthearum Endl. 725. 1.

Flores diclines, bracteati. Perigonium verticillis duobus, tetrameris, alternantibus, decussatim imbricatis ovario adnatis. Masc. Stamina plurima, columnae centrali, pileo hemisphaerico margine ciliato coronatae biseriatim sub apice adnata; antherae sessiles, uniloculares, extrorse dehiscentes; pollen simplex, globosum, glabrum. Feminini: Ovarium subinferum uniloculare multiovulatum, ovula spermophoris quatuor parietalibus in medio ovarii ampliatis funiculis longis affixa anatropa, bichlamydea; stylus carnosus, brevis apice truncatus, stigmatosus, pervius. — Fructus baccatus carnosus, unilocularis, phyllis perigonialibus, tectus. Semina plurima exalbuminosa, minuta, angulata; testa reticulata crustacea, nucleum arcte cingente; embryo globosus aequabilis.

Plantulae parasiticae, ramis plantarum dicotylearum insidentes, aphyllae; flores solitarii e cortice protuberantes globosi magnitudine pisi minoris, bracteis quatuor suborbicularibus, phyllis perigonialibus similibus fulti, sepala petalaque rubro-fusca, cum ovario connata eique insidentia; fructus carnosus fuscus.

1. SARNA CAULOTRETI Karst. l. c.

Sepala petalaque semidiscoidea obtusa basi lata ovario adhaerente, ei aequalia carnosiuscula margine eroso-ciliata; antherae 48 contiguae semiglobosae.

Locis calidis hyeme imbribus copiosis humectatis Venezuelae usque 1000 metr. altitudine Caulotreti truncos scandentes habitans.

2. SARNA INGAE Karst. l. c.

Sepala petalaque lanceolata obtusa, basi lata ovario insidentia, stigma superante, scariosa, margine integra vel apice erosa.

Ramis Ingae specierum insidens, in fluminis Cauca valle prope oppidum Popayan observata.

Ordo XIII. RAFFLESIACEAE *Schott et Endl.*

(Walp. Ann. III. 512.)

Subordo *RAFFLESIEAE* R. Br.

(Walp. Ann. l. c)

727. RAFFLESIA *R. Br.*

1. RAFFLESIA ROCHUSSENII, Teysm. et Binnendk. — De Vriese, memoire sur les Rafflesias Rochussenii et Patma. 1855. p. 4. (tab. I.).

Dioica. Masc.: antheris 15—19, serie simplici disci inferum marginem cingentib.; columna 15—19 sulcis descendentib., anther. oppositis; disco subpatellaeformi, glabro, in medio stellato, v. processibus in medio (1—2) obsesso; polline sphaerico. Foem.: pro anth. in facie inferiore patellae offert parva tubercula, valde distantia, interna structura homogenea; tubo perianthii interne squamoso, v. ramentaceo, v. glandulis longe stipitatis instructo.

Habit. in montis Salak silvis umbrosis ad 4000' alt. Crescit in trunco, in ramis decumbentib. et in radice Cissi serratifoliae Roxb. (Cfr. Hook., misc. II. suppl. t. 6; Walk. et Arn. pr. 128). — Nat. Tijdschr. voor Nederl. Indië, I. 1850. 423.; Hook. journ. of bot. and Kew gard. misc. III. 1851. p. 217.; Miquel, Anal. bot. Ind. III. in Verh. van het Koninkl. Nederl. Instit. III. ser. V. I. Stuk. 1852.

R. Rochussenii masc.: vide descr. amplam l. c.

Rafflesia Rochussenii fem.: Miq. excerpta observat. de R. Rochuss. femina editarum, c. annotatione epicritica, in Linn. XXVI. p. 224—234.

2. RAFFLESIA PATMA Bl. (Walp. Ann. III. 512 n. 1). — De Vriese in memoire sur les Rafflesias Rochussenii et Patma p. 5. tab. II.

Dioica, (nec hermaphrodita); caeterum satis bona diagnosis. Florae Javae.

Habit. insulam Noessam Kambangan, crescit in trunco et radicib. Cissi scariosae Bl.

R. Patma masc.:

Forma Rafflesiae Patmae masc. ante plenariam explicationem, universe magis lata et depressa esse videtur. In sexu foemineo contra minus lata, at magis elevata, ita ut certe ex nostris observationib. liceat efficere, sexum jam posse determinari e forma externa. — Sequitur adhuc descriptio amplissima l. c.

Subordo *APODANTHEAE* R. Br.

(Walp. Ann. III. 514.)

725. PILOSTYLES *Guill.*

(Walp. Ann. III. 515.)

1. PILOSTYLES THURBERI A. Gray. — A. Gray in pl. nov. Thurberian. p. 326.

Bracteis sepalisq. rotundis margine nudis; ovario semisupero; stigmate disciformi sessili medio subumbonato.

Planta parasitica in ramulis Daleae Emoryi degens, in monte quodam pr. flum. Gila detecta. — Specimen tantum foemin., flores circ. $1\frac{1}{2}$ lin. diam. etc.

Subclasis IV. SCITAMINEAE.

Ordo XIV. ZINGIBERACEAE.

1621. GLOBBA *L.*

Icon addenda.

GLOBBA MARANTINOIDES R. W. (*Gl. marantina* R. W. Ic. non Willd.). — Wight Ic. tab. 2001.

GLOBBA OPHIOGLOSSA R. W. — Wight Ic. tab. 2002.

1622. ZINGIBER *Gärtn.*

1. ZINGIBER NIMMONII, Dalz. — Dalzell Contrib. to the bot. of West. Ind., Kew journ. bot. IV. 341.

Alpinia Nimmonii, Grah. catal. of Bombay.

Caule rubro-virescente glabro, f. lanc., acuminatis b. in pet. brevissimum angustatis, supra laete viridib. subt. pallidis arachnoideis, spica adscendente ovata breve pedunculata verticem vix e solo exserente, bracteis lin-oblongis v. lanceolatis acutis glabris rubro-striatis interiorib. bifidis, corollae laciniis exteriorib. flavescenti-rubris, labelli trilobi flavi lobo intermedio ovato-rotundato vix emarginato, capsula ovi columbini magnitudine. (Proximum Z. pandurato Roxb., an cum eo identicum?).

Crescit in utroq. Concano, etiam in jugo Syhadrensi; fl. Julio.

2. ZINGIBER MACROSTACHYUM Dalz. — Dalzell Kew journ. bot. IV. 342.

Caule rubro pubescente, f. lanc. acuminatis supra atro-virentibus subt. pallidis pubescentib., spicis e radice solitariis v. geminis cylindricis elongatis longe pedunculatis, bracteis obovat., acut., rubiginosis, corollae albae labio 3-lobo, lobo intermedio rotundato emarginato lin. purpureis flabellatim picto, capsula obovata pubescente rubra, bracteis breviore, ovi fringillini magnitudine seminib.; atropurpureis arillo longe fimbriato omnino tectis, spica florifera sesquipedali rubiginosa fructifera magis elongata laeta rubra.

Cresc. ad Ram Ghât; fl. Julio. — Species valde distincta spicis suis longe pedicellatis foliisq. suis atro-viridibus. Radices multo magis aromaticae sunt quam in Z. Nimmonii et cernui.

Alpinia Mesana, Grah. Catal. of Bomb. pl. n. 1455.

Nomen vernaculum „Meesum".

3. ZINGIBER CERNUUM Dalz. — Dalzell Kew journ. bot. IV. 342.

Caule glabro laete viridi, f. anguste ellipticis acuminatis utrinq. glabris, spicis ovatis obtusis brevissime pedunculatis verticem vix e solo exserentibus, bract. ovatis v. oblongis obtusiusc., luteo-virescentib., glabr.; interiorib. brevit. trifidis, corollae laciniis exteriorib. alutaceis, labelli trilobi lobo intermedio ovato profunde bifido albo puniceoque lateralibus flavo puniceoque pictis.

Crescit ad Ram Ghât; Fl. Julio. — Petiolus in apice semper paulo curvatus, et labellum inter omnes alias Zingiberum species pulcherrime tinctum. Fructus luteo albus; semina (immatura) rubra, striata, arillo membranaceo.

Icones addendae.

ZINGIBER ZERUMBETH J. E. Smith. — Wight Ic. tab. 2003.
ZINGIBER SQUARROSUM Roxb. — Wight Ic. tab. 2004.

1623. CURCUMA *L.*

(Walp. Ann. III. 604.)

1. CURCUMA ROSCOEANA Wall. — Hook. in bot. mag. tab. 4667.

Radicib. e fibris plurimis, tuberiferis, tuberib. parvis ovalib., f. oblongis acuminatissimis unicolorib. glabris, spica centrali oblonga subtetragona aurantiaca nuda, br. obovatis obtusissimis ap. patentib., anth. cristata, loculis discretis ecalcaratis.

C. Roscoeana Wall. pl. As. rar. I. p. 8. t. 9. (non tab. 57 ut affirmat Dietrich).
Ex littoribus fl. Irawaddi.

Icones addendae.

CURCUMA AROMATICA Salisb. — Wight Ic. tab. 2005. — (*C. Zedoaria* Roxb.)
CURCUMA NEILGHERRENSIS R. W. — Wight Ic. tab. 2006.

1624. KAEMPFERIA *L.*

(Walp. Ann. I. 810.)

1. KAEMPFERIA UNDULATA Teysm. et Binnend. — Teysmann et Binnendijk pl. novae horti Bogor. in Kruidk. Arch. III. p. 391. — Kreyenberg, in Bullet. de la soc. imp. de Mosc. (1854) vol. 27. p. II. p. 255.

F. radicalib. vaginatis lanc. acutis undulatis glabris subt. glaucesc., spica centrali brevissima pauciflora, laciniis corollae exterior. angusto-lanc. limb. interiorib. lanceolatis labello bifido, stigmate cyathiformi.

In horto bot. Buitenz. culta. — Planta 6 ped., f. 7'' lg., $1\frac{1}{2}$ l., tubus corollae filiformis 2'' longus, limbus bilabiatus 6-lobus albus, lobis 3 lin-lanc., labio 2-fido, purpureo; filamenta supra antheras continuantia, bifida atque reclinata.

Icon addenda.

KAEMPFERIA ROTUNDA Willd. — Wight Ic. tab. 2029 (in 2 speciminib.). — Fl. des serres X. tab. 1041.

1625. ROSCOEA *Smith.*

1. ROSCOEA PURPUREA Smith. — Hook. in bot. mag. tab. 4630 (1852).

Spica brevi sessili pauciflora intra folior. vaginas inclusa, labello obovato profunde bilobo, caule gracili, f. lanc., angustissime acuminatis.

R. purpurea Smith, exot. bot. II. 97 t. 108 et Linn. transact. XIII. 460. — Royle ill. Him. bot. tab. 89. f. 3. (non Hook. fl. exot. t. 144, non Roscoe Mon. pl. t. 86, non Lindl. bot. reg. 1840 t. 61).

Icones addendae.

ROSCOEA ALPINA Royle. — Wight Ic. tab. 2013. 1.
ROSCOEA LUTEA Royle. — Wight Ic. tab. 2013. 2.

1628. AMOMUM *L.*

(Walp. Ann. I. 810.)

Hooker on some African spec. of Amomum in Kew gard. misc. VI. 293.

§ 1. *flores solitarii.*

1. AMOMUM MELEGUETA, Rosc., mon. pl. — Hook. l. c.

F. anguste lanceolatis, vaginis gracilib., scapo 1-floro, bract. lin-

oblongis cuspidatis, perianthio exter. spathaceo acuminato, interiore foliolo dorsali oblongo, lateralib. e b. lanceolata sens. acuminat., labello late obovato-quadrato marg. undulato- crispato, filamenti processubus lateralib. subulatis, antherae lobo terminali subtriangulari ap. integro obtuso dentato v. bifido angul. lateralib. subelongatis subulatisve, ovario glabro, staminod. liberis subulat., fructu ampullaceo ovato v. elliptico-oblongo glabro, perianthii tubo aequilongo coronato, seminib. angulato-globos. pallide brunneis, testa nitida verruculata.

Pereira, in Pharm. journ. VI. p. 412; mat. med. II. p. 1131. fig. 235—241. — Guibourt, hist. nat. des drogues simpl. II. p. 222.

Hab. Accra, Yorruba, et Sierra Leone. nom. vern.: „Attare in Africa occid. et Tokolo nipomah" in Fernando Po. — F. spithamaea ad bipedalia laete viridia, nervis costa parallelis. Scap. 2—4 ped. lg. Bracteae numerosae appressae 1—2 p. lg., luride virides. Fl. odori. Perianthii labello albido extus marginibusq. purp. tincto, int. secus medium aureo. Fr. carnosus, 1—5 p. lg. forma varia, pulpa carnosa. Semina valde aromatica et pungentia, $^1/_6$ p. lg., areola luteola v. subnulla.

§ 2. *Scapi 2- v. pluriflori.*

a. Labellum angustum, pendulum.

2. **AMOMUM DANIELLI**, Hook. fl. in journ. bot. IV. 129. tab. 5. (sub. nom. A. Afzelii)

Glaberr., caule elong. folioso, f. lin.-lanceolat. ($1^1/_4$ ped. lg., 3 unc. l.) lge acuminatis striato-venosis, scap. radicalib. floriferis 2 unc., fructif. 4—6 unc. lg., 3—5 floriferis, bract. oblg. cymbiformibus obtus., florib. flav., corollae lob. lateralib. patentib. subulato-acuminat., dorsali amplo obovato-oblongo caeteris longiore, labello late lineari-oblongo, planiusc. rigido, marg. subundulato, filamento b. utrinq. appendicula subulata aucto, fructu lineari-ampullaceo rostrato (tab. VI. sub nom. A. Afzelii).

Hab. Gold and Slave coasts and Clarence Town, Fernando Po; vulgaris; var. β. Sierra Leone. — Fl. Jun. et Jul. 8—9 ped., planta ab indigenis „Barsalo" nominata. Bastard *Meligetta*. Pereira, mat. med. II. fig. 251 et 252. — *A. macrospermum?* Sm. in Rees Cycl. v. 39. — Pereira, mat. med. II. p. 1139. — Guibourt, hist. nat. de drogues simpl. II. p. 218. fig. 119? — *Zingiber Meleguetа* Gaertn. de fruct. I. p. 34. t. 12. fig. 1.

var. β. purpureum; flore purpureo, anthera ap. truncata.

A. Danielli, Hook. bot. mag. t. 4764.

Species facile distinctu florib. aureo-flavis, et labello angusto dependente, tamquam in planta Orchidacea.

b. Labellum ampl., erect., limbo horizontali-explanato.

3. **AMOMUM GRANUM-PARADISI** Linn. sp. pl. I. p. 2. — Hook. l. c. p. 295.

F. elliptico-lanc., acuminatis, ligula obtusa v. biloba, scapo multifl., bract. laxe imbricatis puberule obtusis mucronatis, perianthio exter. tubo brevi limbo obtuso, interiore ext. puberulo, lob. lateralib. obtus. dorsali ovato-oblongo obtuso, labello amplo late obovato-rotundato, marginib. undulato-plicatis, filamento b. utrinq. processub. 2 subulatis locul. puberulis, staminod. linearib. obtusis, ovario pubesc., f. ampullac. v. elliptico-ovato v. lanceolato profunde sulcato pubesc., seminib. brunneis subquadrato rotundatis, testa atro-brunnea nitida.

Smith in Rees. Cycl. vol. 39. — Pereira, mat. med. II. p. 1130. f. 234. — Pharm. journ. v. 6. p. 412. — Guibourt, hist. nat. des Drogues simpl. II. p. 221. f. 122. Hook. bot. mag. t. 4603.

A. grandiflorum Sm. exot. fl. I. t. 111. — *A. exscapum* Sims. ann. bot. I. p. 248. t. 13. — *A. Afzelii?* Rosc. in Linn. transact. VIII. p. 354; Smith in Rees Cycl. v. 39.

Hab. Sierra Leone. — Semina totidem aromatica quam in A. Melegueta Rosc. sed minus pungentia.

4. AMOMUM LONGISCAPUM Hook. fl. l. c. p. 296.

F. approximatis lin-lanc., longe acuminatis b. truncatis cordato-bilobis, ligula brevissima truncata, scapo elongato erecto, bracteis plurimis appressis sens. longiorib. superiorib. l. oblongis obtus. truncatisve, fl. 3—5 terminalib., calycis tubo elongato ap. acuto, perianthii lobis lateralib. e b. lata sensim angustatis, dorsali oblongo-obtuso, labelli limbo amplo late obovato rotundato marg. undulato-plicato, filam. brevi b. utrinq. processub. 2 inaequalib. instructo, antherae lobo terminali ap. rotundato lobulis lateralib. cornutis ascendentib., staminod. liberis linearib., fr. anguste lanceolato compresso trigono, seminib. immaturis,

Hab. Regent et Sugar-loaf Mountain, Sierra Leone. Herba elata glaberr. F. pedalia 2½ p. l. Scapi 6—10 p. graciles. Bract. infer. parvae, super. latae, 2 p. purpureo-maculatae. Fl. ampli inodori. Perianthii tubus gracilis, labellum purp., b. albidum. Anth. purpurea. Fr. siccus 2½—3 p. long., ¾ p. l., glaber, parietib. ut videtur vix carnosis. Sem. immatura, valde angulata, arillo papyraceo tecta.

5. AMOMUM CEREUM Hook. fl. l. c.

F. lineari-lanc. (b. obliquis) ap. long. acuminatis, ligula brevi truncata, scapo gracili elongato sub 6-floro, bract. appressis obtusis truncatisve cuspidatis, calycis spathacei tubo elongato ore brevi ap. subacuto, perianthii interni tubo b. solido lob. lateralibus linearib. obtusis dorsali oblongo-obtuso, labello amplo late rotundato marg. crispato plicato, filamento b. utrinque processu cornuto, antherae lobo terminali ap. truncato lateralib. divaricatis subulatis, staminodiis coadunatis ap. tantum liberis, ovar. glabro superne solido elongato, fructu lin-lanceolato, seminib. majusc. angulatis pulpa (sicco tenui) immersis, testa laete brunnea.

An *A. citratum* Pereira, mat. med. II. p. 1137?

Hab. Regent, Sierra Leone. Dr. Daniell. — Fol. 6—10 p. long., 1—1½ l., bas superiore breviore in petiol. brevem decurrente. Scapi florif. 4 p., fructif. 8 p. long. Bract. sensim majores, superiores ½—2 p. long. Fl. albi, cerei. Perianthii lobi albi. labello cereo. Anth. flava, connectivi marginib. roseis. Fr. ap. rostratus, 2—2½ p. long. Semina magna, ⅙ p. diam., insapida.

1627. ELETTARIA *Rheed.*

1. ELETTARIA ANTHODIOIDUS, Teysmann et Binnendijk, pl. n. hort. Bogor. in Kruidk. Arch. III. p. 392. — Kreyenberg, Bullet. de la soc. imp. de Mosc. (1854) vol. 27. p. II. p. 255.

F. petiolatis, oblongis acuminatis, b. rotundatis, interd. subcordatis, supra lucidis, utrinq. glabris, marginib. ciliolatis, spicis brevib. clavatis, anthodio subobovato, dense imbricato, bract. interiorib. lato-ovatis rotundatis, mucronulatis albido-roseis coloratis, labello rubro luteo marginato.

Caulis plerumq. 8 ped., f. 2 pedalia 1½ poll. l., petioli 4 lin. longi, superne depressi; pedunc. 8 poll. altus. — Habit.: Tapos (Jeon.); fl. Novbr. Dec.

Icon addenda.

ELETTARIA CANNAECARPA R. W. — Wight Ic. tab. 2007.

1628. DONACODES *Blume.*

(Walp. Ann. I. 810.)

1. DONACODES VILLOSA Teysmann et Binnendijk pl. nov. horti Bogor. in Kruldk. Arch. III. p. 392. — Kreyenberg in Bullet. de la soc. imp. de Moscou (1854) vol. 27. p. II. p. 256.

Caule herbaceo, rhizomatib. haud elevatis, f. petiolatis, oblongis, acuminatis, b. in petioles decurrentib. supra glabris, subtus villosis, vaginar. ligulis oblongis, rotundatis, interd. ciliatis, spicis dense imbricatis ovato — oblongis, bract. late ovatis, rotundatis, mucronatis, tubo corollae anthera petaloidea clauso, geniculato, ap. dilatato, labello intus calcarato, pubescente, marginib. inflexis.

Caulis herbac., 6—8 ped. f. 2 ped., 2 poll. l.; pet. ³/₄ poll. long.; spica 2¹/₄ p. longa, 2—3—4 fl., fl. 5¹/₂ p. longis; tubus corollae obscure ruber, filam. petaloideo clausus, labio citrino. — Habit. in monte Salak. — Fl. toto anno.

1630. HEDYCHIUM *Koen.*

(Walp. Ann. III. 604.)

Wallich the species of Hedychium, in Kew gard. misc. V. 377. (charact. gener. secund. spec. 23 hic memoratas ampl.)

Cal. tubulosus, 3 dentatus, deciduus (exc. H. scaposo). Cor. tubus elong. gracilis, limbi lacin. exteriores angustae, interior. difformes; labellum majus (praeter H. Horsfieldii) bifid., raro indivisum. Filam. filiforme nunc planiuscul. Anth. terminal. linear. (minuta in H. villoso), locul. b. solutis, connectivo ap. nudo (in H. scaposo crista brevi terminato). Styl. filif.; stigma infundibuliforme (praeter H. Horsfieldii, cui inaequalit. 2-lobum). Ovar. infer., triloculare; ovula plurima angulo centr. loculi affixa, horizontalia. Caps. 3-locul., nuda (excepto H. scaposo, cui calyce immutato coronata), loculicide 3-valvis. Sem. plurima, arillata.

Herbae asiaticae caulescentes, erectae, radice rhizomatosa horizontali (tuberosa in H. scaposo); f. in vaginis ¹/₂ amplexicaulibus petiolat. v. subsessilib.; inflor. terminali spicatâ spathis (bracteis exteriorib.) arcte imbricantib. v. patulis, florib. solitar. v. fasciculat., bract. propriis involutis.

A. *Coronariae*, Spica pl. min. arcte imbricata.

1. HEDYCHIUM CORONARIUM Wallich l. c.

F. oblongo - ellipticis subt. pilosulis, bract. ovat., infimis aliquando ap. foliac. - expansis, tubo corollae semiexserto, lacin. interiorib. lanc. v. ovatis, labello latissimo subquadrato obt. bilobo, subsessili, stamen paulo superante.

H. coronarium Koen. in Retz. Obs. fasc. III. p. 73. Roxb. in Asiat. Res. XI. p. 325. ejd. Fl. Ind. ed. Car. I. 9; Roem. et Schult. syst. 1. 19. 560; Spreng. syst. I. 9; Dietr. Sp. I. p. 31; Dietr. Syn. I. p. 9; Smith in Cycl. Rees XVII. in loco n. 1. ejd. exot. bot. II. p. 95. t. 107; Blume enum. pl. jav. I. p. 56; bot. mag. XIX. n. 708. — Rosc. in Linn. transact. VIII. p. 343. t. 20. f. 6. ej. mon. pl. n. 51. (tab. synoptica). — Wight ic. VI. p. 17. t. 2010. — Wall. Cat. n. 6529. — *Hedychium*, Griffith notul. in pl Asiat. III. p. 419. (sec. spec.). — *H. Prophetae* et *H. album* Ham. ic. pict. in mus. Procur. Ind. Or. — *H. spicatum*, Bot. Cab. VII. n. 653. — *Gandasulium* Rumph Amb. V. p. 75. t. 69. f. 3. — *Gandasuli* Lam. Enc. bot. III. p. 603. — *H. Gandasulium* Ham. in herb. Smith.

β. *florib. lutescentibus.*

H. flavescens Carey ap. Rosc. l. c. n. 50. — Spreng. syst. I. Cura post. p. 6. — Bot. Cab. VII. n. 723. — Dietr. spec. I. p. 32; Dietr. synops. I. p. 9. — Wight. ic. VI. p. 17. t. 2008. 9. — Bl. enum. Pl. Javae I. p. 56. — Bot. magaz. n. 2371. excl. syn. — *H. coronarii* var. Hamilt. in Cycl. Rees., l. c. — *H. chrysoleucum* Hook. bot. mag. LXVI. n. 4516; Lindl. et Paxt. flow. gard. I. p. 110. n. 159. t. 77; Walp. Ann. III. p. 604. — *H. sulphureum*, Wall. ic. pict. in mus. cit. — *Hedychium coronarium* bot. Cab. VI. n. 507. — Wight ic. pict. in mus. cit. — *H. coronarii* var. Carey ap. Roxb. l. c.; in nota. — Var. d, Bl. l. c.; Horsf. ic. pict. n. 155 in herb. Banks.

γ. *florib. intense luteis:*

H. urophyllum bot. Cab. XVIII. n. 1785.

δ. *statura floribusq. maximis:*

Hed. maximum Rosc. l. c. n. 52. — Spreng. l. c. p. 6. — Dietr. sp. p. 32. — Dietr. Syn. p. 9.

ε. *f. angustis, spicis abbreviatis, Bl.:*

Hedych. coronarii var. b., Bl. l. c.

ζ. *f. infra sericeis, Bl.*

H. coronarii var. c. Bl. l. c.

Patria. Typica forma florib. candid. centro in citrinum vergentib. propria videtur terris Malayanis, fors etiam insul. Philippinis et China; per Hindustaniam inferiorem et peninsul. Indiae culta, praecipue in Bengalia.

β. Napalia. Simla — Sikkim — Jugum Khasianum — Assam — Nilagiri — Dindygul. — Concan — Ceylona — Tavoy et Mirgui — Java in hortis, e Malacca allat. — Cochinchina? — δ. Napalia, Sikkim — ε. Provincia Bantam Javae. — ζ. Prov. Cheribon Javae, in hortis.

2. HEDYCHIUM FLAVUM Wallich l. c. p. 326.

F. oblong. glabris, bract. ovatis, tubo corollae plus dimidio exserto, lacin. exteriorib. ang. linearib., interiorib. oblong. cuneatis, stamine labellum subrhomboid. bilob. acutiuscul. subaequante v. paulo superante.

H. flavum Roxb. hort. Beng. p. 1. — Wallich Cat. herb. n. 6542. — Bot. cab. VII. n. 604. — Rosc. mon. pl. n. 48. — Bot. mag. VIII. n. 3039. — Wall. ic. pict. in mus. Procur. Ind. Or. — *H. coronarium?* potius nova sp., Roxb. in Herb. Banks.

Patria. Jugum Kasianum. — Speciei nomen rectissime florum colorem designat.

3. HEDYCHIUM ELLIPTICUM Wallich l. c. p. 327.

F. ellipticis, spica fastigiatâ, bract. laxiusc. imbricantibus, corollae tubo dimid. exserto, limbi interioris, exteriore angustissimo brevioris, laciniis cuneatis, stamine labellum lanceolat., acute bifid. bis superante.

H. ellipticum Hamilt. in Cycl. Rees XVII. in l. c. n. 2. — *H. album* β. Hamilt. in Herb. Smith. — *H. fastigiatum* Wall. Cat. n. 6510.

Patria Napalia. Kamaon; ad alt. 3—4000' — Sikkim ad alt. 4—5000' — Montes Kasianae. — Spicae jam ante praefloratione fastigiatae, florib. albis staminibusque aurantiacis, v. florib. lutescentib. — Spec. in Nipal rarior.

4. HEDYCHIUM THYRSIFORME Wallich l. c.

F. ellipticis lucid. subt. vaginisq. pilosulis, spica subelong. squarrosa, bract. cylindrac-convolutis recurvis valde approximat., tubo corollae tertia, parte exserto, limbi interioris, exteriore angustissimo brevioris, laciniis lin-cuneatis, stamine labellum ovale acute bifidum, nunc fere indivisum bis superante.

H. thyrsiforme, Hamilt. in herb. Smith n. 4. — Wall. Cat. n. 6541. — *H. hetero-*

mallum Bot. reg. IX. n. 767. — Spr. cur. post. 6. — *H. Tocucho* Hamilt. in herb. Banks.

Patria. Napalia Sikkim. — Species bracteis suis cylindrac - convolutis et eleganter recurvis distinctissima, flores omnes albi — in Nipal vulgatissima.

B. *Spicatae.* Spica elong. Bracteae distantes patulae.

5. HEDYCHIUM SPICATUM Wall. l. c.

F. lato - lanceolatis, bract. planis v. levit. convolutis tubo dimidio breviorib., limbi laciniis linearib. stamineque labello ovato obt. bilobo breve unguiculato brevioribus, interiorib. latioribus.

H. spicatum Hamilt. l. c. n. 3. — Royle nat. hist. Himal. p. 357 et 358. — Spreng. Syst. p. 9. cur. post. p. 7. — Dietr. Spec. p. 33. — Dietr. syn. p. 9. — Bot. magaz. n. 2300. — Hook. excl. Fl. I. n. 46. — Rosc. l. c. n. 48. — Wall. Cat. n. 6553. — *H. album* Ham. in herb. Smith.

β. *trilobum;* spicâ pauciflora, bract. convolutis 1-flor., lobulo brevi cuspidato in sinu labelli.

H. trilobum Wall. n. 6554. Id. ap. Roscoe l. c. in observ. generi praefix. et ad *H. spicatum.* — Dietr. spec. p. 37. — Dietr. synops. p. 10.

γ. *acuminatum;* bract. convolutis subunifl., labelli lanceolati lobis acuminatis.

H. acuminatum, Rosc. l. c. n. 47. — Spreng. Cur. post. p. 6. — Dietr. sp. p. 34. — Dietr. syn. p. 9. — Bot. mag. n. 2969. — Bot. Cab. XVIII. n. 1795.

Patria. Napalia. Kamaon. Rupes calcar. Mussuri — Jug. Suen. in lat. sept. 30°. ad elev. ped. 6000′ ad 7000′ — Sikkim ad alt. 5000′ Jug. Kasian. — Species vulgatissima in Nipal. Flores albi, in var. γ. lutescentes; γ. in valle Nepalensi.

6. HEDYCHIUM VENUSTUM Wallich l. c.

F. lanceolatis, spica nutante, bract. subconvolutis unifl., lacin. limbi linearib., labello lanc., acute bifido stamen superante, capsulis villosis.

H. venustum Wight ic. VI. p. 17. t. 2012. — *H. cernuum* Wight ibid. t. 2011.

Patria. Coorg? Wight. — Jugum nilagiricum.

7. HEDYCHIUM VILLOSUM Wall. l. c.

F. lanceolatis brevit. petiolat., spica elong. densifl., bract. 1—3 floris, calyce tuboque dimid. exserto villosis, laciniis limbi linearib. labelloq. oblongo bilobo, stamine dimid. brevioribus, antherâ minuta sagittata.

H. villosum Wall. in Roxb. Fl. ind. I. p. 12. — Cat. herb. n. 6545. — Roem. et Schult. mant. p. 15. — Spr. syst. p. 9. — Dietr. spec. p. 34. — Dietr. syn. p. 9. — Rosc. l. c. n. 56.

Patria. Napalia, Jug. Kasian. — Assan.

8. HEDYCHIUM GRACILE Wallich l. c. p. 367.

Glabrum, omnib. partib. minutiss. glanduloso - punctatum, f. ovato-lanc. acuminatis, bract. binis convolutis 1-floris tubo parum breviorib. laciniis limbi lobisq. labelli fere bipartiti linearib., stamine valde porrecto.

H. gracile Roxb. Hort. Beng. p. 1. — Corom. pl. III. p. 48. t. 251. — Fl. Ind. I. p. 12. (c. nota Careyi); et in herb. Banks. — Roem. et Schult. mant. p. 15. add. I. p. 71. — Spreng. syst. I. 9. — Dietr. spec. I. 33. — Dietr. syn. 9. — Wall. Cat. Herb. n. 6543. — *H. glaucum*, Rosc. mon. pl. n. 3. Spreng. cur. post. p. 6. — Dietr. Spec. I. p. 34. — Dietr. syn. p. 9.

Patria montes Kasiani. Sikkim. — Flores albi v. lutescentes (cream - coloured), stamine rubro.

9. HEDYCHIUM DENSIFLORUM Wallich l. c.

Glabrum, f. ellipticis, br. 1-floris, laciniis limbi interiorib. cuneiformib.; labelli subsessilis ovato - lanceolati bifidi lobis acutis, stamine aequante, antherâ carnosa, dorso convexâ.

H. densiflorum Wall. Cat. herb. n. 6552.

Patria mons Shivapura, Napaliae. Sikkim ad elev. 5—6000'. — Fl. aurantiaci. — Non persuasum habeo, H. densiflorum speciem ab H. gracili distinctam formare. H. gracile certe nunquam in Napalia collectum est.

10. HEDYCHIUM GOMEZIANUM Wallich l. c.

Glabrum, glanduloso-punctulatum, f. lanc., nunc supra glanduloso-lineolatis, bract. approximatis geminat. 1-fl., calyce tuboque exsertis, laciniis limbi exteriorib. angustiss. linearib. interiores superantib., labello, cuneato bilobo, stamine longissimo.

H. Gomezianum Wall. Cat. n. 6543. — *Hedychium*, Griffith notul. III. p. 419. (prima sp.).

Patria: Tavoy; Mirgui. — Planta terrestris v. epiphyta, et rupibus et arboribus insidens.

11. HEDYCHIUM GRIFFITHIANUM Wallich l. c.

F. lanc. acuminatissimis punctis creberr. linearib. inaequalib. parallelis obsitis, subt. pilosis, bract. geminatis remotiusculis 1-fl., calyce duplo v. triplo breviorib., tubo valde exserto, limbi laciniis elong., linearib. labelloque lanceolato bilobo, deorsum long. attenuatis.

Species proxima H. Gomeziano, num varietas ejusdem? Patria. Kasia.

12. HEDYCHIUM GARDNERIANUM Wall. l. c.

F. ellipticis, subt., imprimis spicâ intense furfuraceo-glaucis, bract. convolutis 1—2 floris, labello ovali subsessili integro v. bidentato, nunc suborbiculato, stamine longissime porrecto.

H. Gardnerianum Wall. ic. pict. 2. in mus. procur. Ind. or. — Spreng. Cur. post. 6. — Dietr. spec. 39. — Dietr. syn. 9. — Bot. reg. IX. n. 774. A et B; Rosc. mon. pl. n. 62. — Griff. notul. III. p. 419. (ad exempl. in caldar. Comitissae de Vandes flor.). — *H. speciosum* Wall. in Roxb. Ind. I. 13; Cat. herb. n. 6550; Pl. Asiat. rar. III. t. 285. — Etiam in Herb. Banks. Roem. et Schult. mant. 16. — Add. I. 71. — Spreng. syst. I. 9. — Dietr. spec. 35. — Dietr. syn. 10. — Hook. fil. ic. 2. pict.

β. labello suborbiculato unguiculato integro v. bilobo.

Wall. ic. pict. in Mus. supra mem. — Cathcart ic. pict.

γ. labello subquadrato bilobo unguiculato.

H. Roscoei Wall. ap. Rosc. l. c. in observ. generi praefix. — Wall. ic. in mus. mem. — Dietr. sp. p. 37. — Dietr. syn. p. 10. — *H. aurantiacum* Wall. Cat. n. 6551. et ic. pict. 2. in mus. mem. — *Hedychium* Griff. Op. posth. II. p. 35?

Patria: Napalia. Sikkim ad alt. 6000'. Jug. Kasian. — β. Napalia. Sikkim γ. Napalia. — Pulcherrima totius generis spec., in forma et magnitudine labelli ut in coloribus valde variabilis.

13. HEDYCHIUM SIEBOLDII Wallich l. c. p. 371.

F. ellipticis subtus, bracteis convolut. remotiusc. multifloris, calyceq. ferrugineo-villosis, laciniis limbi interiorib. unguiculatis acuminat., labello bipartito lob. semiovatis staminis dimidium subaequante.

H. flavescens Lindl. herb. et in hort. soc. journ. VII. 281. — Ejusd. et Paxt. flow. gard. III. 164. n. 648. f. 311. — (haud Carey ap. Rosc.). — *H. Roxburghii* Sieb. in hort. soc. journ. l. c. (haud Blume).

Patria? — Flos dicitur pallide luteus, filamento laete aurantiaco tincto, odorem fragrantem emittens.

14. HEDYCHIUM ANGUSTIFOLIUM Wallich l. c. p. 371.

F. approximatis bifariis oblong., b. rotundat.; spicâ 6-faria, bract. ternatim verticillatis 3—4 floris; labello longe unguiculato suborbiculato profunde bilobo obtuso, st. valde porrecto.

H. angustifolium Roxb. Hort. Beng. p. 1. — Corom. pl. III. p. 47. (excl. t. 251); Fl. ind. I. p. 11 et 82. (nota Wall.); etiam in Herb. Banks. — Roem. et Schult. mant. p. 15. add. I. p. 71. — Spreng. syst. I. p. 9. cur. post. p. 6. — Dietr. sp. I. p. 36. — Dietr. syn. I. p. 10. — Wall. Cat. n. 6547. — Bot. reg. II. n. 157. (excl. syn. *H. coccinei*). — Bot. magaz. n. 2078 (excl. eod. syn.) — *H. aurantiacum* Rosc. mon. pl. n. 61. — Spreng. cur. post. 6. — Dietr. sp. 37. — Dietr. syn. 10. — *H. coccineum* Bot. Cab. VIII. n. 705. — *H. species* Griff. op. posth. II. p. 24. n. 371? ibid. p. 35. n. 569? — *H. squarrosum* Hamilt. in herb. Banks.

Patria: Montes Kasiani — Goalpara — Assam superior — Sikkim, infer. et tractus terrayanus hinc adjacent. — Chittagong — Ceylona?

15. HEDYCHIUM COCCINEUM Wallich l. c. p. 372.

F. ensiformib. b. acutiuscul. spicaq. glaucis, nunc pube parca subt. conspersis, bract. 3—6 floris, laciniis limbi interioris cultriformibus, labello ovato bilobo acutiusc. ungue brevi, st. porrecto.

H. coccineum Hamilt. in Cycl. Rees XVII. in loco n. 5. — Ic. pict. in mus. Proc. Brit. Ind. Or. — Royle, nat. hist. Him. p. 357. — Roem. et Schult. mant. 14. — Spreng. syst. I. 9. — Dietr. sp. I. 36. — Dietr. syn. I. 10. — Wall. ap. Roxb. in fl. Ind. I. 82 (in nota). — Ic. pict. in mus. cit. — Cat. Herb. n. 6548. — Bot. reg. XIV. n. 1209. — Rosc. mon. pl. n. 58 (excl. syn. *H. angustifolii*, Roxb. Corom. quoad ad descriptionem). — *H. longifolium*, Rosc. l. c. n. 59. — Spreng. cur. post. 6. — Dietr. sp. p. 36. — Dietr. syn. p. 10. — *H. angustifolium*, Roxb. Corom. pl. III. tab. 251. (excl. descr.). — Rosc. l. c. n. 60. (reversâ citat. Roxb., exclud. nempe descriptione non ic.). — *H. coccinei* var, Hamilt. l. c. — *H. carneum* Rosc. l. c. n. 57 (non Careyi). — Bot. Cab. VII. n. 693.

β. florib. carneis nunc fere albis, labello plicato subinfundibuliformi (statura proceriore).

H. elatum Brown in bot. reg. VII. n. 526. — Bot. Cab. IX. n. 856. — Rosc. l. c. n. 63. — Spreng. syst. 9. cur. post. p. 7. — Dietr. sp. p. 35. — Dietr. syn. 10. — Wall. Cat. n. 6549. — *H. carneum* Bot. mag. n. 2637. — Rosc. in herb. Hook. ex h. Liverpoolienso (non mon. pl.). — Wall. ic. pict. in mus. Proc. Ind. Or. — Spreng. cur. post. p. 6. — *H. stenopetalum* Bot. Cab. XX. n. 1902. — *H. barbatum* Wall. Cat. n. 6548? (specim. defloratum).

Patria: Napalia. Kamaon ad elev. 5000'. Sikkim. — β. Napalia et Kamaon. Mons Taong-Dong prope Avam?

16. HEDYCHIUM HASSELTII Bl. Wallich l. c. p. 373.

F. lanceolatis acuminat. glabr., spicâ elong. patente laxe imbricata, spathis obtus. seric., fasciculis solitar. 2—3 fl., tubo corollae limbo triplo longiore lacin. subaequalib. lin-lanc., labelli 2-partiti segmentis falcato-lanc., obtuse acuminatis. (Blume).

H. Hasseltii enum. pl. Javae I. p. 56. — Dietr. syn. I. 10.

Patria: Javae silvae occident., supra arbores. — Mons Prahu Javae. — Fl. albi et plantae nomen Javanicum „Simpol" teste Horsfield.

17. HEDYCHIUM INTERMEDIUM Bl. — Wallich l. c. p. 374.

F. lin-lanceolatis ad costam subt. pubescentib., spica elongata laxa fasciculis solitariis ternis subtrifloris, limbi laciniis tubo dimidio brevioribus, exteriorib. ang. linearib., interiorib. lin-lanc., labello longitudine aequalib.; labelli bipartiti segmentis falcato-lanc., obtusiusculis (Blume).

H. intermedium Bl. l. c. p. 57. — Dietr. l. c. p. 10.

Patria: Montosa Java occidentalis. — „Hinc H. villoso, inde elato accidit". Bl. l. c.

18. HEDYCHIUM SIMILE Blume — Wallich l. c.

F. lanc. acuminatis glabr., spica brevi erecta, laxe imbricata, spathis acutis marg. inflexis sericeis, fasciculis solitariis 1—2 floris, tubo corollae limbo triplo longiore, laciniis interiorib. extern. multo latiorib. lanceolat., labelli 2-partiti segmentis falcato-lanc. acuminatissimis (Blume).

H. simile Bl. l. c. p. 57. — Dietr. l. c. p. 10.

Patria: Mons Salak supra arbores. — „Affine H. Hasseltii et gracili, Roxb." Bl. l. c.

19. HEDYCHIUM ROXBURGHII Bl. — Wallich the spec. of Hedychium, in Kew gard. misc. V. 374.

F. lanc., acuminatis subt. villosis, spica elong patente laxe bifariam imbricata, spathis acutis villosis, fasciculis remotis subbifloris, limbo tubo dimid. breviore, lacin. lin. lanceolatis, interiorib. longiorib. b. angustatis, labelli bifidi laciniis obtusis.

H. Roxburghii Bl. l. c. p. 57. — Hassk. Cat. alt. hort. Bogor. p. 51.

β. spicis densiorib. fascicul. approximatis, inferiorib. 4-floris. — Bl. l. c. — Hassk. l. c.

Patria: Silvae primaevae montis Gede Javae. — β. Silvae humiliores ejusd. montis ignivomi. — Distincta spec. ab Hedychio villoso, folior. villositate, laciniis corollae longitudine haud aequalib. labellum superantib." Blume l. c. — „An H. glaucum, Rosc.?" Hassk. l. c.

20. HEDYCHIUM LINGULATUM Hassk. — Wallich l. c.

F. elliptico-ovatis v. lanc. subt. glaucescentib. pubesc., ligulis longiss.: spica vix exserta, bract. obtusiusculis 3—4 fl.; calyce tubi dimidium vix aequante; lacin. externis linearib, interiorib. spathulato-oblong.; labello subrotundo unguiculato filamentum aequante.

(Char. ad descr. cit. Hassk. concinnat.)

H. lingulatum Hassk. Cat. alt. Horti Bogor. p. 51.— Plantae rar. jav. p. 135.

Patria Java. — „Inter H. glaucum et thyrsiforme collocanda species, quae ulterior diversa f. undulatis filiformi-acuminatis, bract. subreflexis 2—3 fl., labio filamento breviore, lacin. limbi linearib., vagin. haud viridib., ligula brevi". Hassk. l. c. — Limbus exterior lutescens, interior albus labelli b. croceа, teste Hasskarl.

21. HEDYCHIUM SPANOGHEANUM Wall. l. c. p. 375.

F. oblong., attenuato-acuminat. glabris, bract. approximatis elongat. acut. convolutis calyce tuboque longiss., dense obsitis villis sericeis adpressis, laciniis exteriorib. angustiss, longiss., interiorib. lanceolatis, stamine labellum bipartitum? superante, antherae loculis basi altius solutis.

Patr. Java, Spanoghe in Herb. Hook. — Tubus villosus c. 5. p. long.

C. *Siphonium.* Limbi interioris lacinia postica subcucullata mucronata. Anthera leviter cristata. Calyx persist. immutatus.

22. HEDYCHIUM (*Siphonium*) SCAPOSUM; Wall. l. c. p. 375.

Subacaule, glabr., radice tuberosa, f. fere omnib. radicalib. lanc., acuminatis petiolos vaginaef. ligula destitutos longitud. aequantib., spica bract. subimbricantib. attenuatis, tubo longiss., labello ovato, bifido subsessili.

H. scaposum Nimmo, Grah Bombay Cat. p. 205. — *Monolophus scaposus* Dalz. in Hook. journ. II. 143. — Wight ic. VI. t. 2030. — Walp. Ann. III. 605.

Patr.: Concan austr.; in paludos. planitierum Karle et silv. Lawanowlee, copiose. — Ripae rivulorum prov. Malwae — Malabar — Jugum (v. Angustiae) penins. Ind. Or. vulgo *Ghats* dictum — Paludes ad Karle ad Kandolam. — Teste Dalzell planta pulchra, fl. albis inodoris.

D. *Brachychilum*. Brown. mss. Labellum nanum retusum sessile. Stigma bilabiatum, labio inferiore triplo longiore.

23. HEDYCHIUM (*Brachychilum*) HORSFIELDII Brown mss. — Wallich l. c. p. 376.

Glabrum, f. lanc., acuminatis, spicâ laxiusc., bract. ovatis 2—3 fl., tubo gracili, limbi interioris laciniis lateralib. ovalib. obtusiusc., exteriores lanceolatas acutas latitud. triplo excedentibus.

Patr. Mons Prahu Javae. — Planta elegans glabra, rhizomatosa, juxta specim. unicum c. 2-ped. F. punct. lineolisq. longitudinalib. creberrimis notata. Ligulae perquam tenues, rotundato-obtusae. Cal. glanduloso-punctat., tubo 1/3 brevior, ore hinc fisso inde acervulo pubescentiae. Limbi exterioris laciniae ang. lanceolatae, concaviusc., acutae, tubo breviores, post expansion. reflexae; tertia acumine brevi subulato; interioris laciniae lateral. oval. obtusiusculae, longitud. limbi exterior., ejusd. laciniis duplo et ultra latiores, punct. minutis glandulosis creberr. instructae, immerse venosae. Labellum minutum vix 1/6 longitudinis lateralium, latius quam long., retusum, punctatum. Filam. intra lacin. acuminatam limbi exterioris insertum, c. b. labelli oppositi quasi continuum, breve, lineare, concaviusc. Anth. lato-lin., ap. nuda, b. semibifida. Stigma bilabiat. hispidum, lob. ciliatis, inferiore triplo longiore subovato.

1632. ALPINIA *L.*

Icones addendae.

ALPINIA RHEEDII R. W. (Rheede). — Wight Ic. tab. 2026.
ALPINIA NUTANS Rosc. — W. Ic. tab. 2027.
ALPINIA CALCARATA Rosc. — W. Ic. vol. VI. p. 18. tab. 2028 (in tab. nutans dicta).

1636. MONOLOPHUS *Wall.*

(Walp. Ann. III. 605.)

Icon addenda.

MONOLOPHUS SCAPOSUS Dalz. (Walp. l. c.). — Wight Ic. tab. 2024.

1638. COSTUS *Linn.*

1. COSTUS AFER Ker. — Specificum contra Nauseam: cfr. Hook. Kew. journ. bot. Novbr. 1855. — Hab. in Insulis de Los, haud procul Sierra Leone.

Icones addendae.

COSTUS SPECIOSUS Smith. — Wight Ic. tab. 2014.
COSTUS NEPALENSIS Rosc. — Regel Gart. fl. 1855. p. 341. tab. 139.

Ordo XV. CANNACEAE *Agardh.*

(Walp. Ann. III. 605.)

1641. THALIA *Linn.*

THALIAE SPECIES

in horto regio botanico Berolinensi cultae auctore H. Steudner, in ind. h. Berol. 1857.

Genera: Canna, Amomum, Costus, Alpinia, Curcuma, Kämpferia et Thalia a Linnaeo jam (in systemate vegetabilium) in familiam naturalem, quam Scitamineas appellavit, congregata sunt. Heliconia autem et Musa, genera tam propinqua, ob staminum

fertilium numerum propterque rationes sexuales in systemate ab illis longe ei separandae erant. Illustr. R. Brown (Flinder's voyage p. 575; verm. Schr. I, p. 97; prod. Fl. Nov. Holl. p. 307; verm. Schr. III., p. 163) Cannam L., Marantam L., Thaliam L., Phrynium Willd. et Myrosma L. fil. (genus postmodum remotum), quae ab aliis Scitaminearum generibus anthera uniloculari differunt, segregavit et Cannearum sive Marantacearum familiam constituit. Equidem virum cl. C. Koch (Berliner allgemeine Gartenzeitung 1857, p. 141) sequens hanc familiam aut potius subfamiliam finibus angustioribus accuratius includam, Canna, germine triloculari, polyspermo et stylo recto, acuminato remota. Marantaceis ita circumscriptis genus Calatheae quoque a cel. G. F. W. Meyer (primitiae Fl. Essequeb. 1818) constitutum, recte adnumeratur. Cl. Sonder (neue allgem. deutsche Gartenzeitung von E. Otto, Hamburg 1849, tom. V. p. 225) Stromanthem addidit, genus quod a Thalia L. nihilo differt et sicut Goeppertia N. ab E. et Peronia De Cand. abdicandum est. Quod ad numerum et dispositionem partium floris attinet cl. Lestiboudois (Mém. de la Soc. des Sciences, de l'Agricult. et des Arts de Lille 1823 et 1824; Annal. des Sciences nat. 1829 p. 123) primus erat, qui florem in tota Scitaminearum familia ad eundem typum ac in aliis Monocotyleis constructum esse demonstravit. Deinde eum sequens ill. Nees ab Esenbeck de Maranta arundinacea et Thalia dealbata in Linnaea (1831, t. VI, p. 303) praeclare disputavit. E Marantacearum familia, strictiori sensu circumscripta, Linnaeus duas solum species, Marantam arundinaceam et Thaliam geniculatam cognovit. Maranta Galanga L. Alpiniae species est. In diagnosi Thaliae Linnaeus fructum secundum Plumierum drupam nucleo biloculari praeditam esse contendit, qui error sine dubio originem inde traxit, quod in sectione transversali embryonis, hippocrepidis instar curvati, cavitas duplex apparet. Contra cl. Roscoe (Monandrian plants of the Order Scitamineae, Liverpool 1828) errorem eo ortum esse contendit, quod Plumierus, sectione transversali duorum juxtapositorum florum facta, unum tantummodo germen loculis duobus animadvertere sibi videbatur.

Calyx trisepalus. Corolla brevissime tubulosa, laciniis exterioribus tribus subaequalibus, interiorum duabus anterioribus basi angustatis, tertia maxima labellum aut nectarium auctorum referente. Staminodia bina, alterum cum labello connatum, alterum cucullatum. Filamentum petaloideum, bilobum, lobo altero subfilamentiformi, antherifero. Germen inferum, triloculare, loculis duobus posterioribus dissepimentorum crassissimorum (receptaculi N. ab E.) pressione evanescentibus, tertio fertili. Ovulum solitarium, annatropum.

Maranta differt staminodio cucullato, bilobo, germineque uniloculari; Phrynium contra et Calathea germinis loculis tribus fertilibus. — Herbae perennes, subacaules seu caulescentes, rhizomate saepissime tuberoso. Petioli vaginantes, a latere compressi, ad apicem tumidiusculi. Foliorum lamina oblonga, subobliqua, oblique cuspidata. Inflorescentia thyrsum distichum, secundum vel spicam bracteis bifariam dispositis, simplicem vel compositam proferens. Bracteae ramulum brevissimum aut longiorem, bi- aut pluriflorum involucrantes aut fulcrantes, virides vel coloratae. Bracteolae pellucidae. Flores breviter pedicellati vel subsessiles. Sepala 3, nonnunquam colorata. Styli pars suprema cum stigmate subtrilobo perforato-concavo aut crateriformi sub anthesi a staminodio cucullato involuta, postea labello apposita. Germen triloculare, sed mox pseudo-uniloculare, monospermum, loculis duobus axin versus sitis inanibus, demum evanescentibus, postice dissepimentis tribus incrassatis, corpus trigonum crassum ovulum versus concavum et persistens formantibus impletum.

Sect. I. *THYRSO CONFERTO.*

1. *Bracteis viridibus, imbricatis, ramulis abbreviatis sub-8 floris.*

1. THALIA SETOSA C. Koch Berl. allgem. Gartenz. 1857, p. 258; *Phrynium setosum* Rosc. Mon. plants 14, t. 107; *Maranta setosa* A. Dietr. spec. plant. tom. I, p. 23.

Petioli graciles, erecti, pilis hirtis rufescentibus, punctis insidentibus vestiti, superne asperi. Margines vaginacei dimidium petiolum occupantes. Tumor viridis. Lamina lineari-oblonga. Bracteae lanceolatae, superne et margine pilis rigidis fuscis praeditae. Corolla alba, superne lilacina. Germen superne setis brunneis nitidis vestitum.

Petioli bipedales. Foliorum lamina patentissima, imo subreflexa, inferiorum 15 poll. longa, 6 poll. lata, oblonga, superiorum 15 poll. longa, 5 poll. lata, lineari-oblonga, glabra. Bracteae virides, ramum abbreviatum circumdantes. Sepala oblonga, erecta, dorso medio virescentia, versus apicem margine fimbriata. Corolla albido-lilacina, medio lutea. - Cl. Roscoe (l. c.) ex errore capsulam trilocularem et trispermam esse dicit. Habitat in Brasilia.

2. THALIA SELLOI C. Koch Berl. allg. Gartenzeit. 1857, p. 258 (nondum descripta); ? *Maranta compressa* A. Dietr. spec. plant. tom. I, p. 22.; *Maranta Selloi* hort.

Petioli patuli, undique hirti. Tumor petiolo vix crassior, flavescens. Lamina lato-oblonga, Margines vaginacei dimidio petiolo longiores. Bracteae ovatae, margine pilis fulvis obsitae. Labellum albidum. Germen adpresse pilosum, apice annulo fulvo-piloso cinctum.

Foliorum lamina lato-oblonga, 12 poll. longa, 5—6 lata, erectiuscula, nervo medio subcanaliculato. Bracteae ramum abbreviatum fulcrantes, omnino involucrantes. Sepala margine ad partem superiorem ciliolata, dimidiam corollam albam, interiore parte auream superantia, viridi-pellucida. Flores brevissime stipitati, 4 lin. longi, tubo $1\frac{1}{2}$ lin. longo. — Habitat in Brasilia?

3. THALIA LUSCHNATHIANA C. Koch Berl. allg. Gartenzeit. 1857, p. 258 (nondum descripta); *Maranta Luschnathiana* hort.

Petiolus gracilis, erectus, dorso et versus apicem undique hirtulis, ceterum glaberrimus. Margines vaginacei dimidium petiolum vix attingentes, hirtuli. Tumor petiolo crassior. Lamina foliorum inferiorum ovato-oblonga, superiorum oblonga. Germen pilis longis instructum.

Petioli 2—$2\frac{1}{2}$ ped. longi. Foliorum lamina 12 poll. longa, 6 lata, glabra. — Patria?

2. *Bracteis coloratis, ramulis abbreviatis bifloris.*

4. THALIA GLUMACEA C. Koch Berl. allgem. Gart. Zeit, 1857, p. 163; *Maranta glumacea* hort.

Foliorum lamina oblonga, breviter petiolata, supra fascia longitudinali dilute virescenti notata, ceterum intense viridia, pilis adpressis fulvis subvelutina, subtus pallide viridia, pilis prostratis remotis adspersa. Thyrsus compositus, 24—30 florus, bracteis oblongo-lanceolatis, flavescentibus. Germen pilis fulvis, adpressis vestitum.

Lamina foliorum reflexa aut horizontaliter patens. Petiolus per totam logitudinem vaginis instructus, pilis adpressis vestitus, 2 poll. longus. Tumor viridis, supra densissime pilosus, subtus glabriusculus. Folia 3—4 poll. longa, $1\frac{1}{2}$—2 lata. Scapus radicalis pauciramosus. Rami bractea compressa, ancipiti fulcrati. — Patria?

5. THALIA LEPTOSTACHYA C. Koch Berl. allg. Gart. Zeit. 1857, p. 258 (nondum descripta); *Maranta leptostachya* et *Maranta speciosa* hort.

Glaberrima. Petiolus gracilis, pallide virescens. Tumor viridis. Margines vaginacei dimidium petiolum vix attingentes. Foliorum lamina oblonga, patentissima. Bracteae roseo-flavescentes, paene omnino involventes. Germen pilis albido-fulvidis, accumbentibus vestitum.

Foliorum lamina 12 poll. longa, 3 lata, glaberrima, nitens. Inflorescentia simplex, secunda, pedunculo communi tenui e petiolorum membranis vaginaceis egrediens. Bracteae flores omnino fere involventes, basi mox soluti et caduci. Flores 5 lin. longi, tubo corollino $1\frac{1}{2}$ lin. longo, 1 lin. lato.

6. THALIA LINKIANA Steudn. *Phrynium compositum* Lk. in hort. Berol.; *Thalia composita* C. Koch Berl. Allg. Gart. Zeit. 1857 p. 258; *Maranta composita* hort.

Petioli crassiusculi, patentes, dorso puberuli, marginibus vaginaceis triente parte brevioribus, fimbriatis. Tumor petiolo tenuior, antice atro-violaceus, postice flavescens. Lamina patens, denique horizontalis, foliorum inferiorum ovato-lanceolata, superiorum ovato-oblonga. Inflorescentia composita e spiculis pluribus, distichis, oblongis. Bracteae rubescenti-flavidae, pellucidae. Corolla albo-violascens. Germen glaberrimum.

Petioli $1\frac{1}{2}$ ped. longi, crassiusculi, lamina 15 poll. longa, sub medio 5 poll. lata, glaberrima. Bracteae involventes, lanceolatae. Flores albi, apice violascentes, bracteis paullulum minores, 5—6 lin. longi, $2\frac{1}{2}$—3 lin. lati. Sepala oblongo-lanceolata, pellucida, corolla duplo minora. Corollae laciniae exteriores oblongae, albae; interiores duae angustiores, albae, apice violascentes. Germen glaberrimum pedicelli crassitudine.

Sect. II *SPICA LAXA, SPICULIS MULTIFLORIS*.

1. *Acaules:*

7. **THALIA DEALBATA** Fras. opusc. Lond. c. tab. aen. del. a *Sowerby*; *Th. dealbata* Rosc. Linn. Trans. tom. VIII. p. 340; Ait. hort. Kew ed. II, tom. I, pag. 3; bot. Mag. tab. 1690; R. Brown. Prodr. Fl. Nov. Holl. p. 307; R. Brown. verm. Schr. tom. III, p. 163.; Röm. et Schult. syst. veg. tom. I, p. 18 et 559; mant. I, p. 9; Spreng. syst. veg. tom. I, p. 8; Smith in Rees Cyclop.; Rosc. Mon. pl.; *Peronia stricta* de Cand. in Redouté Lil. tom. VI, tab. 342; Röm. et Schult. syst. veg. tom. I. p. 18; *Maranta dealbata* A. Dietr. spec. plant. tom. I, p. 24.

Folia longe petiolata. Lamina oblongo-lanceolata, glaberrima. Spica paniculata scapo longissimo insidens, bracteis orbiculato-ovatis, lividis, pulverulentis. Corolla purpureo-violacea. Germen glabrum.

Scapus pulverulentus, folia longe superans, 4—6 ped. altus. Foliorum lamina 1—$1\frac{1}{2}$ ped. longa, glaberrima. Tumor petiolo longo vix crassior. Spiculae 20—30 florae. Sepala ovata, livido-purpurea, tenera. Laciniae corollae exteriores sepalis quadruplo longiores, livido-purpureae, interiores margine atro-purpureae. — Habitat in Carolinae meridionalis lacubus.

2. *Caulescentes.*

8. **THALIA LUTEA** Steudn. ? *Maranta lutea* Jacq. coll. tom. IV, p. 117; ic. var. tom. II, tab. 70; Willd. enum. tom. I, p. 5; Spreng. syst. veg. tom. I, p. 8; ? *Maranta Jacquini* Röm. et Schult. syst. veg. tom. I, p. 558; mant. I, p. 8; add. I, p. 70; Nees et Mart. n. act. ac. Leop. tom. XI, p. 25; A. Dietr. spec. plant. tom. I. p. 18.

Caulis ramosus, glaber. Petiolorum margines vaginacei dimidio petiolo longiores, glaberrimi. Petioli dorso puberuli, pallide virescentes, tumore intensius viridi. Lamina ovato-oblonga, patentissima. Spica paniculata e spiculis alternis, distichis, luteo-aurantiacis composita. Corolla albida. Germen superne annulo fulvo-piloso cinctum.

Foliorum lamina ovato-oblonga, 15 poll. longa, 6 poll. lata, patentissima, zona media puberula. Bracteae involventes, oblongae, luteo-aurantiacae, subpellucidae. Sepala flava. — Habitat ad Caracas.

9. **THALIA SANGUINEA** Lem. jard. fleur. III. tab. 268; *Stromanthe sanguinea* Sond. neue allg. deutsche Gart. und Blumenzeitg. v. E. Otto. Hamburg 1849. p. 225. — Fl. des serres VIII. t. 785.

Caulis glaber. Folia breviter petiolata, patentissima, oblongo-linearia vel oblonga, subtus purpurascentia. Spica paniculata, disticha, sanguinea, bractea communi fulcrata. Flores 10 et ultra bracteis geminis insidentes. Germen pilis adpressis albidis vestitum.

Caulis 2—3 pedalis, subteres, purpurascens. Petiolorum margines vaginacei puberuli, tumorem petiolo crassiorem subattingentes, 4—5 poll. longi. Lamina glabra, supra intense viridis, nitens, subtus purpurascens, 12 poll. longa, 2—3 lata. Bractea lanceolata, purpurascens. Bracteolae oblongae. Sepala sanguinea, ovata, concava, leviter striata. Laciniae corollae exteriores albae, purpureo-punctatae, interiores

albae. Staminodium cucullatum, purpureo-striatum, vix prima juventute stylum retinens. — *Phryn. sanguineum* Hook. bot. mag. t. 4646. — Habitat auct. Sond. in Ind. orientali.

Stromanthe spectalis Lem. jard. fleur. tom. IV. tab. 401 vix a Thalia sanguinea differre videtur. Specimina in horto botanico Berolinensi culta nondum floruerunt. Sectio transversalis germinis in icone data loculos 4 sistit, qui error dissepimento crasso triplici ortus est.

1642. MARANTA *Blum.*

(Walp. Ann. III. 606.)

Subgen. Saranthe Rgl. et Koke. — Ind. sem. h. bot. Petrop. 1857.

Inflorescentia spiciformis, cristata, densa; bracteae oppositae dense imbricatae, secundae (ad alterum latus conversae ibique flores foventes); staminodia duo externa satis parva, non labelliformia; calyx in fructu persistens bracteis communibus inclusus; semina arillo instructa. — Folia marginibus parallelis, ex apice rotundato-obtuso vel obtusiusculo, breviter acuminata. Rami florales apice spicam unam vel duas vel plures paniculatas gerentes. Bracteae distichae sed in unum latus ad modum spicularum Cynosuri cristati L. conversae, et flores 2 vel plures qui in unum latus spectant foventes. Flores parvae vix e bracteis eminentes, bracteolati. Petala et staminodia basi infra medium connatae superne convolutae in tubum breviusculum latiusculum; illa appressa, aequalia; staminodia limbo parvo subarrecto. Staminodia duo externa subaequalia breviuscula, tertium medium intus callo crasso ornatum, quartum intimum cucullatum stigma obtegens.

Hoc subgenus spicis confertis, bracteis imbricatis distichis sed ad modum Cynosuri cristati unilateraliter conversis, floribus vix eminentibus, tubo brevi latiusculo staminodiis duobus externis subparvis insigne complectitur quinque species habitu etiam affines, quarum tres per hortos longe lateque divulgatae sunt. — Primo intuitu generi Calatheae quidem haud absimile sed differt tubo corollae brevi quam germine crassiore (nec tenui gracili elongato), staminodiis externis duobus (nec uno), anthera libera (nec a medio ad basim cum appendice filamenti parva petaloidea connata). Praeterea accedit, quod (monstrante specimine Riedeliano M. Luschnathianae spontaneo et aliis cultis) specimina uberius enata in apice rami floriferi praeter spicas proferunt folia et ramos iterum spicigeros, atque folia accuratius inspecta et forma et colore et splendore magis ad Marantam arundinaceam L. et species affines accedunt. — Nomen e vocibus „σάρος scopa“ et „ἄνθος flos“ compositum propter flores in spicam compositam unilateralem congestos ad modum scopae setis constructae (Germanis: Handfeger). — (Cfr. supra genus Thalia.)

1. MARANTA (*Saranthe*) SETOSA A. Dietr. (cfr. supra *Th. setosa* K. Koch.)

Phrynium setosum Rosc. Scit. tab. 41. — *Maranta secunda* Hort. Edinb.

Foliorum vaginis et spicarum pedunculis et bracteis chartaceis viridibus persistentibus lanceolatis longe acuminatis inferioribus ubique reliquis margine et a medio ad apicem setosis; spicis geminis vel pluribus aggregatis.

Icon Roscoeana quoad plantam totam optima! Pili setosi flavescentes praesertim ad vaginarum et bractearum margines densi et longi. Folia parallelo-oblonga ex apice obtuso vel obtusiusculo subito breviter acuminata, lamina usque 16 pollices longa et usque 4 poll. et 7½ lineas lata. Ramus florifer setoso-hirsutus. Spica (si tres) infima pedicellata, pedicello ¾—1 pollicari: media sessilis et basi bractea reliquis longiore suffulta; summa breviter pedicellata; 1½—2 pollices longae, 1¼ pollicem latae. Bracteae erecto-patentes, circiter pollicares. Bracteolae communes binos flores includentes late ovatae, acutiusculae, dorso bialatae, alis pilosis purpurascentibus, ceterum glabrae, membranaceae, hyalino-albidae. Bracteolae speciales minores ovales,

acutiusculae et dorso uni - alatae vel obtusae et exalatae, glabrae, membranaceae, hyalino-albidae. Germen obovato-cylindricum, pilis appressis longis vestitum, flavidulum. Sepala 3 libera, corollam longitudine aequantia, acutiuscula, apice cucullata, pilis longis arrectis praesertim versus apicem vestita, concava, membranacea, pellucida, albida margine purpurascentia. Petala cum staminodiis infra medium ad basim usque in tubum calyce plus dimidio breviorem germine latiorem connata, ovalia, obtusa, arrecto-pilosa, navicularia, membranacea, hyalino-albida, staminodiis appressa, marginibus se non tegentibus. Staminodia superne in tubum vix limbatum convoluta; duo externa aequalia, spathulato-obovata, rotundato-obtusa, albida. Staminodia interna cum stamine fertili 3; extimum callosum duobus externis vix brevius sed paullo latius, late ovatum obtusissimum callo magno in medium floris porrigente saturate flavo instructum et praeterea in loco alio callose incrassatum, margine albidum medio flavum; intimum inaequilaterum, spathulatum, fere unguiculatum ad alterum latus auricula parum deflexa instructum, flavidum, stylum cucullato-obtegens. Stamen fertile: Anthera libera; appendice petaloidea illam aequante, oblonga, albida apice flavida, filamento usque ad basim antherae adnata. Stylus rectangulariter infractus, demum incurvatus, stomate truncato.

2. MARANTA (*Saranthe*) LUSCHNATHIANA Rgl. et Kcke. (cfr. supra *Th. Luschnathiana* K. Koch.)

Foliorum vaginis et bracteis chartaceis viridibus persistentibus ovatis acutis margine strigilloso-setosis, spicarum pedunculis glabris; spicis plerumque geminis, raro solitariis.

Caulis perbrevis. Folia distiche cespitosa, longe pedunculata, basi vaginata. Vaginae margine flavescenti-setosae ceterum cum pedunculis pilis flavescentibus subsetosis hirtellae vel puberulae, usque pedales. Petioli compressiusculi, paullo infra laminam articulato-incrassati, supra a vagina usque ad articulum sulco instructi, usque 20 pollicares et longiores, articulo supra linea hirtella instructo vel glabro 1—2 pollicari. Lamina parallelo-elliptica, ex apice rotundato breviter apiculata, basi rotundata breviter producta, glaberrima, nervo medio supra sulcato subtus prominente, supra obscure viridis, subtus pallidior 7—12 pollices longa, $3\frac{1}{4}$—$6\frac{1}{2}$ pollices lata. Ramus florifer e medio progrediens, setoso et sparse pilosus demum glabrescens, basi foliis involutus, medio nudus vel folio instructus, apice folium et spicas geminas proferens, usque ad apicem spicae summae $1\frac{1}{2}$ pedes superans. Spicae geminae, usque ad $1\frac{3}{4}$ pollices longae $1\frac{1}{4}$ pollice paullo latiores, summa brevius pedunculata vel subsessilis, pedunculo glabro spicae inferioris usque $2\frac{1}{2}$ pollicari vel multo breviore. Folium summum basim spicarum vaginans interdum ad vaginam redactum. Bracteae ovatae acutae margine flavescenti-setosae ceterum glabrae, distichae sed in unum latus conversae ibique in axillis flores circiter 4 foventes, in altero latere steriles, invicem se amplectentes et arcte appressae, virides, circiter 1 pollicem longae, basi $\frac{3}{4}$ pollicem latae. Flores subsessiles, omnes et singuli bracteolis involuti. Bracteolae communes lato-ovatae, leviter retusae, apiculatae, membranaceae, dorso alis duabus membranaceis rigido-pilosis ornatae, albidae. Bracteolae speciales oblongae, acutiusculae, a medio ad apicem margine rigido-pilosae, naviculares, membranaceae, hyalino-albidae. Germen inferum obovato-cylindricum, pilis appressis strictis praesertim apice vestitum, albidum, uniloculare, uniovulatum et corpusculo placentario instructum. Sepala corollae appressa eamque fere totam involventia, bracteolis specialibus simillima. Petala infra medium ad basim usque in tubum calyce plus dimidio breviorem, germine latiorem connata, oblonga, obtusa, apice cucullata, glabra, navicularia, membranacea, hyalino-albida, staminodiis appressa, marginibus se tegentibus. Staminodia superne in tubum vix limbatum convoluta; duo externa aequalia obovata, rotundato-obtusa, albida, reliquis paullo longiora. Staminodia interna cum stamine fertili 3, extimum callosum late-obovatum, retundato-obtusum, intus callo magno in medium floris porrigente saturate flavo instructum, margine albidum medio flavum; intimum inaequilaterum, spathulatum, unguiculatum, ad alterum latus auriculatum

auricula lata parum deflexa, albidum, stylum cucullato-obtegens. Stamen fertile: Anthera libera; appendice petaloidea illam fere aequante oblonga albida apice flavida, filamento usque ad basim antherae adnata. Stylus apice rectangulariter infractus, stigmate truncato. Fructus membranaceus unilocularis monospermus. Semen truncato-ovale, tuberculatum, arillo biligulato instructum. — Marantae setosae A. Dietr. valde affinis sed optime distincta pilositate evidentius minore praesertim bractearum, foliis brevioribus et latioribus, bracteis ovatis acutis (nec lanceolatis acuminatis). — E Brasilia verisimile a cl. Riedel et Luschnath missa.

3. MARANTA (*Saranthe*) LEPTOSTACHYA Rgl. et Kcke. (cfr. supra *Th. leptostachya*).

Foliorum vaginis margine inferne pubescentibus ceterum cum spicae pedunculo bracteisque albido-membranaceis glabris; spicis solitariis.

Caulis perbrevis. Folia longe petiolata, basi vaginata. Vaginae margine pilis flavescentibus pubescentes ceterum glabrae usque 8 pollicares. Pedunculi compressiusculi, apice articulato-incrassati, supra a vagina usque ad articulum vix sulcati, usque 19 pollicares, articulo 1—1³/₄ pollicari. Lamina oblongo-elliptica, marginibus subparallelis apice subito breviter acuminata, basi obtusiuscula breviter producta, glaberrima, nervo medio supra sulcato subtus prominente, supra obscure viridis et nitida subtus pallidior, usque ultra pedem longa et usque ultra 4 pollices lata. Ramus florifer inconspicuus, foliis multo brevior et occultus, glaber, apice vaginam (non folium) et spicam solitariam terminalem rarissime duas gerens, usque ad apicem spicae 9 pollicaris. Vagina pedunculum spicae 3¹/₄—4³/₄ pollicarem longe involvens, glabra. Spica 1¹/₂—1³/₄ pollices longa, usque ³/₄ pollicem fere lata. Bracteae ovales, obtusae, basi barbulatae ceterum glabrae, distichae sed in alterum latus conversae ibique in axillis flores binos foventes, in altero latere steriles et superiores tantum basi se amplectentes inferiores remotiusculae, tenui-membranaceae, subpellucidae, albidae, usque ¹/₂ pollicem longae et 4¹/₂ lineas latae. Flores bracteis communibus duabus vel una involuti, breviter pedicellati, pedicellis basi connatis. Bracteolae late ovatae, obtusae, glabrae, membranaceae, hyalino-albidae, exterior laevis, interior oblique carinata; si una adest, tum interior. Germen obovato-cylindricum appresse pilosum, flavum, uniloculare, uniovulatum, corpusculo placentario instructum. Sepala 3 oblonga, acuta, glabra, trinervia, membranacea, hyalino-albida, corolla plus duplo breviora, sese invicem marginibus non attingentia. Tubus floris brevis germine latior. Petala 3 aequalia, oblonga, obtusa, glabra, membranacea, hyalino-albida, cum staminodiis superne in tubum convoluta. Staminodia duo externa subaequalia, obovata, rotundato-obtusa, leviter retusa, glabra, albida. Staminodia interna cum stamine fertili 3; extimum lato-obovatum, obtusissimum leviter emarginatum, callo magno intus porrigente flavo instructum, margine albidum medio flavidum; intimum inaequilatere spathulatum, ad alterum latus auriculatum, auricula lata paullo deflexa, inferne flavum, stigma cucullato obtegens. Stamen fertile: Anthera libera; appendice oblonga usque ad basim antherae filamento adnata flavida demum albida quam anthera longiore. Stylus apice primum rectangulariter infractus demum incurvus, stomate truncato. Bracteae una cum floribus non foecundatis decidunt. Si flores foecundantur, verisimile bracteae etiam persistunt. Marantae setosae A. Dietr. et Luschnathianae Rgl. et Kcke. bracteae, ne foecundatis quidem floribus, semper persistunt. (Kcke.)

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4. MARANTA? WARSCEWICZII Planch. — Fl. des serres IX. tab. 939. 940. — Planta acaulis facie Calatheae Zebrinae sed omni parte minor, f. fasciculatis, infimis squamaeformibus, perfectis longiuscule petiolatis, petiolis supra basin dilatatam semivaginantem teretibus, limbo oblongo (6—10 pollicari) brevit. et acute cuspidato marg. integro leviter repando-undulato supra glabriusculo laete viridi fasciis arcuatis pinnatim dispositis obscurioribus ornato secus nervum medium fascia viridi flava marginibus erosa picto subtus sicut petioli molliter velutino violascenti-purpureo, caeteris ... ignotis ideoque genus valde dubium. — Maranta Warscewiczii hortul. — L. Mathieu

prospect. mai. 1853. — Lemaire Ill. hort. 1854 tab. 7. — Ex America centrali in hortis introduxit cel. Warscewicz. — An Phrynium eximium C. Koch et Bouché?

Icones addendae.

MARANTA VIRGATA Wall. — Wight. Ic. tab. 2015. — (*Phrynium virgatum* Roxb.)
MARANTA? sp. var. REGALIS V. Houtte. — Fl. de serres X. tab. 1066—1067. p. 231.
Varietas e Guiana Gallica: E Cayenne in hortis introducta. — Lemaire ill. hort. II. tab. 74.

1643. PHRYNIUM *Willd.*

(Walp. Ann. III. 606.)

1. PHRYNIUM EXIMIUM C. Koch et Bouché. — C. Koch in app. ind. sem. hort. Berol. 1855.
Maranta eximia L. Math.

Acaule, rhizomate crasso; petiolus brevis, apice tumidiusculo glaberrimo excepto villosus; folii lamina oblonga, supra glaberrima, nitens, fasciis transversis albescentibus instructa, subtus velutina, rubro-brunnea; scapus brevis, ferrugineus; sepala pellucido-membranacea, tubo corollino duplo breviora; stigma obliquum, membranula auctum; germen apice truncatum, setis ferrugineis coronatum.

Species a cl. peregrinatore a Warszewicz e tropicis Americae regionibus introducta et primo in horto Mathieviano culta habitu cum P. zebrino Rosc. (Calathea zebrina Lindl.), foliis contra subtus velutinis coloratis cum P. Warszewiczii Klotzsch convenit. — Scapus radicalis, brevis, apice geniculatus et bractea lanceolata a spica ovata distante praeditus, pilis ferrugineis horizontalibus hirsutus; bracteae spicae inferae ovatae, acuminatae, ad superiorem partem sensim attenuatae, omnes pilis ferrugineis dense vestitae, inferiores 6-, superiores 4 florae; flores gemini, bracteolis primariis et secundariis pellucido-membranaceis fulcrati, posteriores prius, anteriores serius evoluti; germen ovatum, apice truncatum, setis ferrugineis coronatum, 3 loculare, dissepimentis crassis et ovulis basilaribus stipite crasso brevi ab apice lato ad basin sensim attenuato praeditum; sepala lanceolata, bracteolis vix longiora, tubo corollino vix pollicem longo duplo breviora; corolla infundibuliformis, alba, laciniis aequilongis, tribus exterioribus ellipticis, extus villosis, duabus interioribus oppositis latis oblongis, lateralibus incurvis, ideoque convexis; labellum dimidio brevius, lateribus convolutum, ab initio totum stylum includens, ad apicem latere altero inflexum, altero in appendicem aristiformem transiens; filamentum basi cum labello connatum, latum, apice bilobum, lacinia exteriore antheram gerente: stylus denique circinnatus; stigma late perforatum. — Folia petiolo longiora, pedalia et longiora, 6 poll. lata, nervis lateralibus parallelis numerosis et fasciis alternis saturate viridibus et albescentibus percursa. Membranae petioli villosi vaginaceae margine involutae.

2. PHRYNIUM VARIANS C. Koch et Mathieu in ind. sem. hort. Berol. 1855.
Heliconia aut *Phrynium discolor* Hort.

Acaule, rhizomate crasso; petiolus elongatus, pilosus, variegatus; lamina folii elliptica, glaberrima, subtus brunnea; scapus brevis, declinato-adscendens, more spicae pilis ferrugineis omnino vestitus; sepala membranacea, corolla duplo breviora; germen apice fulvo-hirsutum.

Cl. peregrinator indefessus a Warszewicz hanc quoque speciem ex America tropica in Germaniam attulit. Foliorum indole ad Stromanthem sanguineam Sond. accedit., sed petiolis variegatis longissimis valde singularis est. — Scapus semipedalis, teres, ad basin declinato-adscendentem folio bracteaeformi, infra brunneo, cartilagineo et pollicari, supra medium contra folio minore, herbaceo, ovato-lanceolato, amplexicauli, vix poll. longo, pagina inferiore pilis ferrugineis dense vestito praeditus; bracteae ovato-lanceolatae, apice elongato postremo recurvae, in pagina superiore glaberrimae, nervoso-striatae; bracteolae primariae bracteis oppositae, oblongae, secundariis lanceolatis duplo latiores, pellucido-membranaceae; flores gemini; sepala anguste lanceolata, corolla duplo breviora; tubus corollinus gracilis, laciniis tribus

exterioribus angustis triplo quadruplove brevioribus; ovarium apice fulvo-hirsutum, 3 loculare; ovula tria stipite basilari crasso insidentia.

3. PHRYNIUM TRIFASCIATUM *) Hort. — C. Koch in app. sem. hort. Berol. 1854.

Acaule; periodice vegetans; folia obovata, basi sensim attenuata, subtus pubescentia, supra glaberrima, fasciis tribus albescentibus praedita; inflorescentia radicalis, capitato-spicata, disticha; corollae laciniae exteriores anguste ellipticae, interioribus obovato-cuneatis breviores; labellum minimum concavum, parte superiore geniculatum, altero latere biappendiculatum, altero basi cum filamento connatum; germen glaberrimum.

Folia pedalia, superne 5 poll. lata, apice rotundata, pallide virescentia, petiolo gracili antice canaliculato, ad partem inferiorem latiori insidentia; bracteae involucrantes concavae, dorso rotundatae, bracteae propriae dorso planae, exteriores bi-, interiores trialatae; bracteolae lanceolatae, dorso carinatae aut alatae, sepalis lanceolatis breviores; corollae laciniae exteriores flavae, 5-striatae, interiores aureae; labellum flavum, concavum, apice lacinula membranacea clausum, altero latere biappendiculatum, appendice superiore calcariformi, altero basi cum filamento demum lato et petaliformi connatum; stylus cum stigmate labello plane inclusus, apice incurvus; stigma laterale breviter tubulosum, perforatum; ovarium 6-loculare; ovula basi placentae columelliformis trigonae inserta. — Species per plures jam annos in hortis europaeis culta, ut videtur, nondum descripta, fasciis foliorum distincta, caeterum accedens ad Phr. grandiflorum Rosc. (Phr. lutescens hortorum).

4. PHRYNIUM? FLORIBUNDUM Lem. — Lem. jard. fl. tab. 189. — Petiolis longe vaginantib. compressis latere fissis dein breviter cylindricis, ap. subinflato-indurato, lamina lanceolata aut obovata inaequilateri supra nitida nervato-costata infra glaucescenti, scapo robusto lateraliter exserto subancipiti ap. unifoliato, spica densa composita, spathis (veris) amplis imbricato-alternis congestis spiculam unam (v. ex alternatione duas) ferentibus, spicula unaquique 8-(v. amplaus) flora, bracteis 3—4 alternatis tubuloso-circumvolutis, flore sessili gemino simul hiante, unoquoque 2—1 bracteolato tubuloso; calyce... Cor. exserta... filamento petaloideo stylum infra amplexante, anthera laterali... Stylo crasso circinato, stigmate cucullato (?)... Ovario triloculari... Ovulis solitariis... ex ap. pendulis...? (ex sicco! quoad flores). — Hab. Serra la Piedade (Minas Geraes) de Jonghe.

Icones addendae.

PHRYNIUM CAPITATUM Willd. — Wight Ic. tab. 2016.
PHRYNIUM SPICATUM. — Griff. notulae post. (1851) p. 408.
PHRYNIUM sp. — Griffith not. posth. (1851) p. 408.

1644. CALATHEA *G. F. W. Mey.*

(Walp. Ann. III. 606.)

1. CALATHEA ZEBRINA Lindl. (*Marantha arundinacea* L.) — Regel Gartenfl. V. tab. 167. fig. 1.

1646. CANNA *Linn.*

1. CANNA WARSZEWICZII Dietr. — Hook in bot. mag. tab. 4854.

F. ovatis marg. coloratis, vaginis spathis bracteis calycibusq. pur-

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*) PHRYNIUM TRIFASCIATUM. — Hort. van Houtt. 1845 fasc. I. p. 9. — Acaule; f. ellipticis inaequilateribus infra puberulis supra glabris et maculis albis congestis zonatim trifasciatis; scapo radicali brevissimo multifloro vix emerso; perianthii segmentis externis linearibus albis, internis amplis ovatis aureis; gynostemate cylindrico ap. oblique bilobo cavo; stigmate sessili cavitatis fundum occupanti; anthera unica apici segmenti interni gynostema arcte circumdanti lateraliter adnata, fructu... — Habit. imperium Mexicanum?

pureis, corollae petalis omnibus intense coccineis inferiore emarginato, capsulis lato-pyriformibus dense papilloso-muricatis atro-sanguineis.

Canna Warszewiczii Dietr. in Otto et Dietr. Gart. Z. XIX. p. 280. — *Canna sanguinea* hort. Germ.

Habit. Costa-Rica, quo a loco natali transtulit in hortos Anglicos cel. Warszewicz.

2. CANNA LILIIFLORA Warszew. — Fl. d. serres X. tab. 1055—56 p. 211. — Planta 8—10 ped., f. oblongis acuminatis acutis glabris utrinque viridibus, racemo terminali horizontaliter infracto brevit. pedunculato bracteoso, bracteis spathaceis scariosis fulvis farina glauca tenuissima cito detersa indutis, fl. amplis sessilibus, laciniis calycinis oblongis obtusis ovario dense papilloso tuberculato multo longioribus perianthii tubum subaequantibus, petalis (veris s. tribus externis) oblongo-linearibus reflexis ap. viridibus, internis (staminodiis) patenti erectis ap. revolutis pallide viridescenti-flavidis, anthera infra medium dorso affixa, stylo lineari complanato leviter inflexo, linea stigmatica terminali incurva; fructu...

C. liliiflora Warscewicz in hort. V. Houtt.

Habit. America centralis, imper. Veraguas.

Ordo XVI. MUSACEAE *Agardh.*

(Walp. Ann. III. 607.)

1647. HELICONIA *Linn.*

(Walp. Ann. III. 607.)

1. HELICONIA DASYANTHA C. Koch et Bouché, ind. sem. h. Berl. 1854.

Folia oblonga, acuminata, glaberrima, petiolo rubro-maculato insidentia; pedunculus communis basi paene horizontaliter geniculatus, glaberrimus; spathae 5—7 concavae, pluriflorae; perigonii sepala 6 in tubum conniventia, 3 exteriora molliter pubescentia, 3 interiora in unum apice interdum 3lobum connata; nectarium trulliforme.

Caulis saepe 5-pedalis; pedunculus erectus, 2—3-pedalis, glaberrimus, nudus; folia 2½ ped. et ultra longa, 8 poll. lata, petiolo a latere compresso, antice canaliculato, 1½—2 poll. longo insidentia; spathae oblongae, rubrae, patentes; perigonium luteum, sepalis lateralibus angustioribus, 3 interioribus in unum connatis (lacinia vaginiformis Rich.) labellum quasi referentibus; stamina 5 fertilia, longitudine perigonii aut vix longiora; stylus cum stigmate perigonio paululum aut vix brevior; nectarium (i. e. stamen sextum, lacinula quinta Rich.) quintuplo sepalis brevius. — Species elegans, ad H. brasiliensem Hook. et acuminatam Rich. accedens, sed pedunculo communi basi horizontaliter geniculato haud aegre discernenda. Patria ignota. — Regel Gartenfl. IV. tab. 198.

2. HELICONIA PULVERULENTA; Hook. in bot. mag. tab. 4685.

F. oblg. tenui-acuminatis marginatis b. cordatis subt. albo-pulverulentis, spathis ternis coloratis (coccineis) folio bracteali concolori breviorib., fl. (parvis, albis) spatha triplo breviorib. pallide viridescentib., sepalo nano oblongo submucronato.

H. pulverulenta Lindl. bot. reg. t. 1848.

Patria adhuc ignota (Brasilia? Ins. Dominica?).

Icon addenda.

HELICONIA BICOLOR Benth. — Sertum Petropolit. 1848—52. tab. 17. — Regel Gart. Fl. V. tab. 172.

1648. MUSA Tournef.

1. MUSA COCCINEA Willd. Roxb. (Planchon). — Planchon in flore d. serres VII. tab. 722—23 p. 219. — Spadix sessilis, bracteis (spathis) imbricatis, inferioribus 2—3 lamina foliacea viridi instructis, caeteris sensim decrescentibus et arctius imbricatis infima sterili, aliis in axilla flores saepius 3 nunc (1—2) sessiles collaterales foventibus, omnib. (petiolaribus) navicularibus, coccineis, apiculo (laminae rudimento) viridi-luteo terminatis. Fl. inferiores tantum hermaphr., caetera ab ovaria effoeta masculi. Perianthii labium anticum ap. 5 lobum, lobis exteriorib. 3, semi-ovatis apiculato-aristatis, 2 interiorib. b. levit. contractis late spathulatis, marg. eroso-angulatis, posticum (labellum) lineari-ellipticum genitalia amplectens, marginibus membranaceis leviter erosum. Stam. 5 (postico sexto plane deficiente). Filam. plane libera linearia crassiuscula, antherae lin. basifixae, erectae, connectivo dorsali lineari in apiculum producto. Pollen album, granulis majusculis laevib., c. mamillis paucis per superficiem sparsum. Ovar. (in fl. hermaphr.) jam secretum oblongo-compressum carneo-albidum, triloculare, loculis plurimis angulo interno affixis effoetis. Styl. filiformis ap. in stigma dorso et facie compressum, ambitu trilobum pallide aurantiacum dilatatus. — (Descr. ad viv.) — In China et Cochinchina indigena.

2. MUSA ZEBRINA V. Houtte. — Fl. d. serres X. tab. 1061—62. p. 223.

5-pedalis, f. petiolatis oblongo-lanc. acutis subtus rubidis supra viridibus saepius maculis nigrescentibus pictis, spadice nutante, spathis caducis ovato-oblongis extus livide violaceis intus viridescentibus, fl. in axilla spathae cujusve 6—12 sessilibus (polygamis?), staminibus (florum hermaphroditorum?) breviter exsertis, stylo ap. capitato brevioribus.

(Charact. e stirpe viva sterili et ex icone.)

Musa Zebrina v. Houtte Cat. hort. ann. 1845.

Species pulchra in hortis Van Houtteanis e seminib., caespitibus Orchideceis Javanicis intermixtis, exorta.

3. MUSA SUPERBA Roxb. — Wight Ic. tab. 2017—2018.

4. MUSAE sp. — Griffith notulae posth. (1851) p. 407.

Subclassis V. ENSATAE Lin.

(Walp. Ann. III. p. 608.)

Ordo XVII. BURMANNIACEAE *Bl.*

(Walp. Ann. III. p. 608.)

PTYCHOMERIA *Benth.*

Burmanniac. e trib. *Dictyostegear.*; Bentham Kew garden. misc. VII. p. 14.

Perianthium infundibulare, tubo longo sub ap. demum circumscisso, limbi decidui laciniae 3 exteriores latae patentes subtrilobae, lob. lateralib. alaeformib. ante anthes. inflexis, 3 interiores parvae v. nullae. Stam. versus ap. tubi 3, cum limbo decidua, filam. breviss., anther.

bilocularib., loc. distinctis, connectivo subdilatato inappendiculato. Ovar. in fundo perianthii adnatum 1-loculare, placent. parietalib. multiovulatis. Stylus ap. trilob., lobis incrassato-dilatatis supra nonnunquam bicornutis v. biaristatis. Capsula subglob., perianthii tubi parte persistente coronata, ap. ad maturitatem irregulariter rupta. Semina angulato-glob., verrucosa, embryone exalbuminoso.

Herbae sapuae inter f. emortua in silvis Brasiliae crescentes, coloratae v. hyalinae. F. et bracteae squamaef., cauli concolore. Inflor. Burmanniae; cyma nempe terminalis bifida, pedicellis secus ramos simplices erectis recurvisve brevib. unifloris, nunc in capitula contracta bract. saepe conspicuis imbricatis, nunc laxa squamis bractealib. minutis v. omnino inconspicuis.

§ 1. *Diplomeria.* — Laciniae perianthii interiores 3 parvae dentiformes. Bracteae saep. squamis caulinis submajores.

1. PTYCHOMERIA FIMBRIATA.

Humilis rigida, squamis ovatis lanceolatisve, cyma subcapitata, florib. sessilib. bracteisq. orbiculatis imbricatis, perianthii laciniar. exteriorum lobo medio fimbriato.

Herba 3—4 p., albescens. Squamae c. 2 l. lg., concavae, latitud. variabiles. Cyma prim. glob.—capitata, dem. lateralit. excrescens, pollic. lata. Bract. amplae, perianthii tubum aequantes, c. fl. arcte imbricatae. Perianth. c. 4 l. lg., post limbum delapsum 2 l., h. levit. 3-costatum; laciniar. exteriorum lob. med. latus, ap. incrassatus et dorso appendiculis linearib. fimbriatus, lateral. membranacei, lacin. inter. in sinubus parvae, latae, crassiusculae. Antherar. loculi discreti obovoidei. Styli lobi dilatati, inappendiculati. Placentae 3, ovul. numerosiss. Semina pauca (saep. 2 tantum vera. ap. cujusve placentae) maturescunt. — In silvis dictis Coatingas ad flum. Uaupés pr. Panuré.

2. PTYCHOMERIA CAPITATA. — Bentham l. c. p. 15.

Humilis. rigidula, squamis angustis, cyma globoso-capitata, fl sessilib. bracteisq lato-ovalis acutis imbricatis, perianthii laciniar. exterior. lobo medio nudo.

Herba albesc., habitu P. fimbriatae affinis, sed paulo altior et tenerior, squamis angustiorib. Florum capitul. non dilatatum. Bracteae ovato-lanc. v. fere orbiculatae, ap. acutatae, perianthio fere aequales; hujus laciniar. exterior. lob. medius crassiusc. sed non appendiculatus; laciniae interiores parvae ovatae. — In silvis inter fol. emortua pr. Panuré ad fl. Uaupés.

3. PTYCHOMERIA CYMOSA. — Benth. l. c. p. 15.

Rigidula, squamis ovatis, cyma divaricata, bract. ovatis oblongisve pedicello brevierib., perianthii imberbis laciniis intimis minutis, styli lobis longe et tenuissime biaristatis.

Herba ½ ped. v. paulo altior, in vivo tota violac. siccitate flavicans, simplex v. subramosa. Squamae concavae, 1—1½ l. lg. Cyma terminalis, primum subcapitata, ramis dem. divaricatis usq. ad 1 — 1½ p. excrescentib. Bracteae lato-ovatae 1—1½ l lg. hyalinae. Pedic. erecti 2 l. lg. Fl. aperti 5 l. longi, post limb. delapsum vix ultra 2 l. Perianth. ext. violac.; int. album; laciniae exterior. latae, lobo medio integro, lateralib. vix angustiorib. alaeformib. tenuib. obliquis, denticulatis; interiores minimae, dentif. vix conspicuae. Styli lobi incrassato-dilatati, supra aristis 2 setaeformib. ultra lineam longis appendiculati. Caps. subglob., 1½ diam., levit. 3-costata. *Sem.* subglobosa. — In silvis flum. Uaupés et in montibus silvosis ditionis Maracayboensis.

§ 2. *Aplomeria.* Laciniae perianthii inter. omnino deficientes. Inflor. laxa, bract. minutis v. nullis.

4. PTYCHOMERIA DIVARICATA. — Benth. l. c. p. 16.

Filiformis, squamis minutis, cymae bifidae ramis divaricatis plurifloris, bracteis minimis clavato-peltatis, styli lobis ap. brevissime bicornib.

Herba albesc., ½ ped. v. interd. fere ped., simplex v. subramosa. Fl. albi ext. punctis violac. colorati, secus ramos 1—3 p. horizontales cymae gracilis regulariter dissiti, erecti. Pedic. ovario vix longiores. Bract. minimae crassiusc., substipitatae, nigrae. Perianth. et stamina P. cornutae. Styli rami ap. pariter appendiculati, sed cornua latitudinem lobor. non excedunt. — Species vulgatissima in littorib. fl. Uaupés, flores odorem emittunt gratum, ei Primulae nostrae haud dissimilem.

5. PTYCHOMERIA CORNUTA. — Benth. l. c. p. 16.

Filiformis, squamis minutis, cyma laxa paucifl., pedicellis elongatis, bracteis minimis angustis, styli lobis ap. longe bicornibus.

Herba tenella, pallida v. subpurpurasc., 3—6 p. Fl. albi in cym. laxam terminal. 3—7 fl. dispositi, addito interd. ramo axill. uno alterove 3—5 floro. Pedic. ovario 2—3plo longiores. Perianth. tubus gracilis, 3 l. lg., limbi laciniae latae tenerr. lobis lateralib. post explication. vix ab intermedio distinctis. Anth. in summo tubo subsess. locul. disjunctis, connectivo tenui. Styli lobi incrassato-dilatati, cornubus subulatis c. lin. longis e fauce perianthii exsertis. Caps. ovoidea, seminib. e quaq. placenta plurimis subglob. — In silvis flum. Uaupés.

6. PTYCHOMERIA MUTICA. — Benth. l. c. p. 16.

Filiformis, squamis minutis, cyma laxa pauciflora, pedicellis elong., bract. parv. ovatis, styli lobis inappendiculatis. — Varietates adsunt 2, colore distinctae, in altera atropurpureo, in altera cinnabarino. Perianth. int. albescit.

In silvis flum. Uaupés. — A Pt. cornuto tantum colore et appendicibus styli deficientib. differens.

7. PTYCHOMERIA TENELLA. — Bentham l. c. p. 17.

Filiformis, squamis minutis, cyma pauciflora, fl. subsessilib., bracteis minimis nullisve, styli lobis inappendiculatis.

Herba albesc, 3—6 poll. Cymae irregul. interd. ad. spic. simplic. interruptam 2—6 floram reductae. Fl. fere 4 l lg. v. in var. β. minores tenerrimi. — In silvis fl. R. Negro pr. Barra et var. in ditione Serra da Gama dicta ad fl. R. Negro et ad ostium R. Uaupés.

1213/₂. CYMBOCARPA *Miers in Linn.*

Perianthium tubulosum, ovario adnatum, superne liberum: limbo sexfido, laciniis tribus alternis minoribus, post anthesin deciduo.

Stamina tria laciniis interioribus (minoribus) perigonii opposita, inclusa; filamentis brevissimis, antherarum loculis disjunctis transversim dehiscentibus. Ovarium gibboso-trigonum, uniloculare, placentis tribus parietalibus, pluriovulatis, ovulis anatropis. Capsula unilocularis, latere unico ad angulum superiorem tantum dehiscens. Semina numerosissima, scobiformia, testa reticulata nucleum vix superante; embryo homogeneus, acotylis, exalbuminosus.

Planta austroamericana tropica in silvis humidis parasitica inde a linea aequatoriali in utrumque hemisphaerium usque ad tropicos migrans.

1218/₅. NEPHROCODUM *Turcz.*

(Cfr. *Cryptonema* Turcz. in Walp. Ann. III. 608.)

1. NEPHROCODUM MALLACCENSE Turcz. (cfr. Walp. Ann. III. 608. *Cryptonema*.) — Observationes. Turcz. Bull. de Moscou XXVI. I. 287. Nomen genericum *Cryptonema* in Bull. de la soc. des natur. de Moscou tom. XXI. p. 590. n. XX. ad designandum

genus Burmanniacearum a me adhibitum, propter nomen antiquius Cryptonema Agardhii (algae marinae impositum), necessarie mutandum est atque propter formam reniformem loculorum antherarum hoc genus Nephrocodum vocandum. *Cryptonema Malaccensis* mea est ergo *N. Malaccense.*

1218⅛. BENITZIA.

Karsten in Linn. XXVIII. 420.

Flores primarii antherarum abortu feminini posteriores hermaphroditi. Perigonium tubulosum inferne ovario adnatum superne liberum, limbo infundibuliforme trilobo demum circumscisse deciduo, dentibus accessoriis conicis totidem inter lobos, lobis tridentatis aestivatione induplicato-valvatis. Stamina tria fauci inserta, laciniis alterna inclusa; antherae connectivo ampliato, crasso, carnoso, dorso affixae, loculamentis disjunctis introrse horizontaliter dehiscentibus, sub anthesin stigmati adhaerentes. Pollen globosum laeve. Ovarium inferum uniloculare, placentis parietalibus tribus e carpidiorum marginibus introflexis, carnosis formatis, undique ovulis anatropis, funiculis brevibus impositis, tectis. (Corpuscula duo, ovulis magnis anatropis similia, cujusvis spermophori apicem terminant.) Stylus teres, stigmata tria, appendiculis longis bicrura, crurium apicibus laevibus dentium lateralium loborum perigonii adglutinatis in alabastro complicatis. Fructus capsularis tubo perigoniali coronatus, sexcostatus, polyspermus, parietibus e costis spermophorisque persistentibus solutis et deciduis, irregulariter fatiscentibus apertus. Semina minuta, testa crustacea, scrobiculata embryonis acotylis exalbuminosi telae cellulosae adnata.

1. BENITZIA SUAVEOLENS. Herba carnosa parasitica, caulis subpedalis filiformis erecti pars inferior hypogaea 4—6″ longa, phyllodiis squamaeformibus dense imbricatis, stolones filiformes ramosos stipantibus donata; pars superior epigaea simplex vel rarius ramosa, foliolis minutis in spiram quincuncialem dispositis remotis, albida vel rubescens; inflorescentia cymosa terminalis; flores odorati, albi, trimeri in bracteae axilla pedicellati nutantes, dentes laterales lobo medio perigoniali minores; antherae flavescentes; stigma croceum appendiculis filiformibus, longissimis, albis. — Sylvas montanas humidas provinciae Caracas et St. Marthae, 5000—6000′ altitud. habitans.

2. BENITZIA POEPPIGIANA Karst. l. c. — *Dictyostegia Poeppigiana* Kl. — Herbarium generale berolinense. Herbula tenera 6—8-pollicaris Benitziae suaveolenti similis, phyllodiis squamaeformibus minimis; floribus erectis bracteolatis in cyma bicruri dispositis. — Ad ostia Amazonae collecta a cl. Poeppig.

STENOMERIS *Planchon.*

Planchon in Ann. sc. nat. ser. III. 18. p. 319.

Perianthium pyriforme-urceolatum, tubo ovario adhaerente, fauce contracta intus annulo prominulo aucta, limbi 6-partiti laciniis levit. biseriatis, subaequalib., subulatis, acutissimis, haud introflexis, aestivatione marginib. anguste imbricatis (?). Stam. 6 sub fauce inserta, fere 1-seriata, laciniis perianthii opposita inter se conformia et libera, connectivor. appendicib. stigmati adhaerentib. introrsum vi deflexa, filam. brevia; connectiva anguste cuneata, anthera ratiora, ex ap. truncato appendicem subulatam stigmati cohaerentem exserentia; antherae biloculares connectivi eis latioris faciei internae (ob situm connectivi supinum quasi externae) adnatae, inter se parallelae contiguaeque, rima longitudinali dehiscentes. Ovar. (inferum) oblongum, trigonum, triloculare, loculis angulo interno pluri-ovulatis; ovula biseriata (?) adscenden-

tia, anatropa (?). Styl. crassus obverse pyramidato-tripterus, ap. trilobus, lob. compressis, bilobulatis, intus in longum stigmatosis (?), ubique versus b. appendicib. staminum punctum adhaerentiae praebentib. Fructus (haud plane maturus) siccus membranaceus, indehiscens (?); in herbario vittam longissimam (fere pedalem) flexuosam simulans, revera tripterus, trilocularis, loculis versus angulum internum hinc inde seminiferis. Sem. (immatura) lin-oblonga, more generis Pini alata, quoad structuram internam haud nota.

Herba (v. frutex?) scandens, habitu et facie Dioscoreae v. Smilacis, ecirrhosa, glaberrima, exsiccatione tota nigrescens. F. alterna, petiolata, cordata, cuspidata, ovata, integerr., arcuatim 7-nervia, nervulis transversis reticulata, rigide membranacea, nitida. Cymae axillares vage divisae laxe multiflorae, folio longiores v. breviores. Fl. pedicellati (pedicellis hinc inde bracteolis subulatis stipatis) circ. 8—10 lin. longi.

Species unica:

1. STENOMERIS DIOSCOREAEFOLIA. Naud. l. c. — Hab. Luzonia Phillipinarum; Cuming, n. 875, in herb. Hook. — (Thismieae, Miers, sect. Stenomerideae Naud.)

1219. BURMANNIA *Linn.*

(Walp. Ann. I. 812.)

1. BURMANNIA TENELLA Benth. — Bentham Triurideae and Burmanniac. collect. by Mr. Spruce, in Kew gard. misc. VII. p. 18.

Filiformis, f. squamaeformib. minutis linearib. appressis, florib. solitariis v. in cyma bifida paucis dissitis, perianthii angulis alatis.

Herba ½ ped. caule simplici v. rar. diviso. Squamae paucae in parte inf. omnes appressae, vix lin. long. Fl. albidi, laciniis apicalib. luteis, magnitudine B. biflorae, nunc solitarii, nunc terni lateralib. longe pedicellatis, nunc rarius pluries secus ramos cymae bifidae subsessiles, remoti; alae oblong., angulo exteriore acuto-adscendente. Antherar. connectivum ap. cornub. 2 brevib. b. membranula obovata appendiculatum. Caps. triloc. et semina omnino Burmanniae. — In silvis arenosis per longitudinem fl. R. Uaupés.

Icones addendae.

BURMANNIA sp. — Griffith notulae (1851) p. 236 (sine descr.) tab. 262 fig. 2.
BURMANNIA AZUREA. — Griffith l. c. p. 236 tab. 262, fig. 1.

Ordo XVIII. IRIDEAE *R. Br.*

(Walp. Ann. III. 610.)

DIERAMA *C. Koch.*

(Genus novum Iridearum.)

Perigonium corollinum, infundibuliforme, tubo brevi, laciniis oblongis, aequalibus, erectis, basi macula oblonga nectarina instructis; stamina 3, tubi margine inserta, erecta, inclusa; antherae oblongae, apice curvato-conniventes, basi bifidae, filamenti emarginatura insidentes; germen ovatum, vix trigonum, spatha arida, nervoso-striata, apice profunde laciniata, maculas nectarinas cingente inclusum; stylus filiformis, stigmatibus 3 linearibus.

Nomen generis a forma perigonii, infundibulum repraesentante, derivatum. Habitu ad Moraeam, floribus ad Geissorrhizam accedit, inflorescentia autem praesertim Diasiae simile, quacum ramis inflorescentiae capillaribus convenit. Rhizoma horizontale, breve, constans e pluribus bulbis solidis maxime compressis persistentibus, inter quos radiculae longae carnosae erumpunt.

1. **DIERAMA ENSIFOLIUM** C. Koch et Bouché.

Fasciculus foliorum basi anceps, scapo brevior; folia lineari-ensiformia, elongata; scapus apice ramosus, ramis capillaribus curvatis; flores in pedicellis brevissimis subsessiles, tenues, parvi.

Fasciculi foliorum cum iis Iridis sibiricae congruunt, quibus vix breviores sunt; folia basi equitantia, viridia, 1½—2 ped. longa, 3—4 lin. lata, apice sensim attenuata, nervoso-striata; rami inflorescentiae nigricantes, medio recurvati, floribus violaceo-purpureis obsiti.

GALATHEA *Liebm.* nov. gen. *Iridearum.*

Ind. sem. h. bot. Haun. 1855.

Perigonium corollinum superum hexaphyllo-partitum, laciniis ext. 3 majoribus patentibus demum reflexis lato-lanceolatis obtusis caeruleis disco barbato luteo lineis maculisque fuscis notato, laciniis int. 3 minoribus spathulatis convolutis apice revolutis rotundato-bilobis lamina coerulea striata disco flavo fusco-maculato, pagina superiori pubescente. Stamina 3 basi perigonii inserta; filamenta libera subulata, antherae lineares basifixae, loculis connexivum marginantibus longitudinaliter dehiscentibus stigmatis lobis dorso per totam longitudinem arcte adglutinatis. Pollen ellipticum ochroleucum. Ovarium inferum oblongo-prismaticum triloculare. Ovula plurima in loculorum angulo centrali biseriata. Stylus brevis filiformis. Stigma dilatatum trifidum, lobis erectis trigonis apice bifidis, laciniis subulatis basi dorso transverse appendiculatis, appendicibus parvis cucullatis. Capsula coriacea oblongo-prismatica basin versus attenuata glabra loculicide trivalvis, valvis 3 striatis fuscis. Semina obovato-angulata apice truncata longitudinaliter dense sulcata nigricantia. Raphe umbilicum basilarem chalazae apicali incrassatae jungens. Embryo axilis albumine corneo brevior.

Herba perennis brasiliensis, radix fibrosa, rhizoma subaulium, folia biserialia ensiformia equitantia ancipitia tenuiter nervata glauca. Scapus compressus anceps biflorus. Flores unilaterales spatha diphylla cincti, spatha inferiore flores longe superante, superiore longitudine florum. Flos singulus spathella diphylla compressa ancipite cinctus, magnus speciosus.

1. **GALATHEA SPECIOSA** Liebm. — Hab. in sylvis pr. Rio de Janeiro. — Folia 3-pedalia 2″ lata. Scapus 2′ longus, 1—1½″ latus. Spathae universalis folium inf. 12″ longum, 1½″ latum, folium sup. 4½″ longum, 9‴ latum. Spathellae 3″ longae, 5‴ latae. Perigonii laciniae ext. 1¾″ longae, 1″ latae; lacin. int. 1⅓″ longae, 8‴ latae. Stylus et stigma 9‴. Antherae 4‴, filamenta 1½—2‴. Ovarium 3—4‴. Capsula 12—14‴ longa, valvae 3—4‴ latae.

Obs. *A Cypella* Herb., cui proximum est genus nostrum, differt: stigmatis lobis bifidis nec trifidis, filamentis liberis, antheris dorso stigmatis adglutinatis, scapo compresso ancipiti, rhizomate subnullo. *A Tigridia* Juss. differt: perigonio usque ad basin fisso, filamentis liberis, stigmatis laciniis dilatatis trigonis bifidis appendiculatis, scapo ancipiti

Nomen genericum olim in plantis Irideis applicatum iterum restituo. *Galathea Salisb.* = *Vieusseuxia Roche*, *Galathea Herb.* = *Amaryllis L.* (Nerine Herb.)

WUERTHIA *Regel.*

Regel Bot. Ztg. 1851. p. 595.

Perig. corollinum superum, tubo gracili filiformi superne vix dilatato; limbo 6-partito, hypocraterif., lacin. subaequalib. deinde recurvo-patentib. Stam. 3, tubo perig. inserta; fil. subulata, erecta, ap. recurva, exserta. Anth. lineares dorso supra b. affixae. Ovar. infer., obtuse trigonum, 3 locul.; ov. plurima in loculor. ang. centrali biseriata. Styl. filiformis; stigm. 3, linearia, complicato-carinata recurva. Caps....

Herba rhizomate bulboso, reticulato-tunicato, ex Nova-Holland. austr. F. lin., ensata, rigida, nervosa. Caulis erectus, simplex teres, laevis. Fl. spicati, magni, speciosi, intra spatham bivalvem membranaceam solitarii, sessiles. — Genus c. genere Sparaxi valde propinquum.

1. WUERTHIA ELEGANS Rgl. — Regel in Bot. Ztg. 1851. p. 596. — Herba speciosa 2 ped. et ultra. F. 1½ ped. 2—3 lin. l. laete viridia. Scapus simplex v. ramosus. Fl. magni albidi, lilacini v. rubicundi; laciniis perianthii ovato-oblongis. Spatha germen includens, phyllis ovatis, superne sphacelatis, integris v. partitis. — Sem. leg. cl. Würth. pr. Port. Adelaide.

1239. **ANTHOLIZA** *Linn. Parl.*

Parlatore nuovi generi e specie di pianti monocotyled. 1854. p. 53.

Perig. corollinum superum irregulare, tubo longo recurvo, inferne stricto subcontorto, dein latiusculo cum limbo sensim continuo, limbo sexpartito, laciniis valde inaequalib., lacinia media superiorum omnibus longiore, erecta. Stamina 3, ap. partis tubi constrictae inserta, laciniis duob. lateralib. superior. et lacinia media inferiorum opposita. Filam. filiformi-subulata. Antherae lin-oblongae, ap. obtusae, b. profunde bifidae ibiq. affixae, extrorsae longitudinaliter dehiscentes. Pollen ellipticum utrinq. acutum laeve. Ovar. inferum oblongum, superne saepe strictum et subincurvum, obtuse subtrigonum, subsexcostatum, ap. floris 6 nectarifluis praeditum, triloculare. Ovula plura (sub 8), obovato-oblonga in loculor. angulo centrali a b. ad medium affixa biseriata subadscendentia, anatropa.

1226. **XIPHION** *Tournef. Parl.*

Parlatore nuovi generi e spec. di piante monocotyl. 1854. p. 43.

Xiphion Tournef. et Iridis spec. ejusd. auctoris; *Iridis* species Linn. et auct., *Xiphium* et *Iridis* species Mill. dict. — (Cfr. Walp. Ann. I. 817.)

Perigonium corollinum, superum irregulare, tubo brevissimo v. subnullo, subgloboso, conico v. subcylindrico, limbo 6-partito, laciniis subinaequalibus, exterioribus majorib. horizontalib. v. subreflexis, b. canaliculatis, imberbibus, interiorib. erectis v. erecto-patentib., b. versus sensim angustatis, ap. saepe emarginatis. Stam. 3, b. laciniarum exteriorum inserta. Filam. lin-subulata, plana. Anth. lineares, longae apicatae, b. bifida affixae, extrorsae, longitudinaliter dehiscentes. Pollen subglobosum v. ellipticum et utrinq. obtusum, laeve. Ovar. inferum, oblongum triquetrum v. subsexcostatum, triloculare. Ovula plurima, obovata biseriata, in loculor. angulo centrali affixa, subhorizontalia, anatropa. Stylus brevis v. brevissimus triqueter, strictus, liberus. Stigmata 3, petaloideo-dilatata, supra carinata, subtus canaliculata, ap. bilabiata, labio superiore majore bifido, inferiore breve v. brevissimo, subbifido v. integro. Caps. membranacea oblonga, obtuse triquetra v. sexangulata

ap. angustata v. acuminata, ap. loculicide trivalvis, trilocularis. Sem. pauca, subglobosa v. compressiuscula, aut plura, compressa, testa crassiuscula, laevi hilo minuto. Embryo rectus, cylindricus, albumine subcartilagineo duplo brevior, extremitate radiculari hilo proxima.

CROCOSMA *Planchon.*

Fl. des serres VII. tab. 702. p. 161.

Perigonium corollinum superum, tubo angusto longiusculo incurvo ap. vix ampliato, limbi subregularis, 6-partiti laciniis oblongis stellatim patentibus b. nec gibbosis nec poriferis, interiorib. paulo majoribus. Stam. 3 infra faucem perigonii tubo inserta, laciniis perigonii interioribus opposita inter se subaequidistantia (non hinc deflexa), filam. longis gracilibus erectis, antheris oblongo-linearibus b. bifidis, dorso infra medium affixis. Ovar. oblongum triloculare. Ovula in loculo quoque circ. 10—12 angulo interno biseriatim horizontaliter affixa, anatropa. Stylus filiformis ap. trifidus, divisuris anguste lingulatis ap. eroso-stigmaticis. Caps. (ex cl. Hook.) subglobosa spatha persistente longior, triloba trilocularis, loculis saep. abortu 3-spermis. Sem. globosa laevia.

Herba perennis, Ixoidea glaberr.; rhizomate bulboso-tuberoso, caule virgato erecto, simplici, ancipiti-compresso, ap. in spicam ramosam b. nudam abeunte, inferne folioso; f. collateralib. ensatis gramineis late linearib. acutissimis planis (non plicatis) nervosis, florib. in spica ramosa sessilibus distichis majusculis croceis, singulis b. spatha bivalvi cinctis, spathae valvis subaequalib. scariosis acutis integris (nec ap. fimbriatis). — (Char. generis e specim. exsicc. Dregeano elicitus). — Diff. ab Ixia tubo perianthii incurvo limboque non plane regulari, a Tritonia fauce perigonii non ampliata a Geissorhiza laciniis perigonii b. non poriferis, ab Hesperantha, sicut ab omnibus praecedentibus capsula triloba, oligosperma nec plus minus prismatica, polysperma. —

1. CROCOSMA AUREA Planch. l. c. — Nomen haustum ab odore crocoideo quem flores siccati aqua tepida infusi exhalant.

Tritonia aurea Pappe ms. in herb. Hook. — Hook. bot. mag. tab. 4335. (Walp. Ann. I. 833. 1. et III. 613 n. 3).

GYNANDRIRIS *Parl.*

Parlatore, nuovi generi e specie di piante monocotyled. 1854. p. 49.

Sisyrinchium Tournef. p. 365.
Iridis spec. Linn. sp. pl. 59 et pl. auct.
Moreae spec. Ten. fl. Nap. 4 p. 10; Ker in bot. mag. tab. 1407.
Diaphane Salisb. in transact. of the hort. soc. 1 pag. 304 ubi nomen tantum.

Perigonium corollinum superum irregulare, tubo longo filiforme, ovarium continuante, limbo 6-partito, laciniis inaequalib. a b. ad medium caniculatis et pilis brevib., crassis barbatis, interiorib. minoribus, erectis, basin versus sensim angustatis et canaliculatis. Stam. 3, stylo et stigmatibus totidem adglutinata, et facile separabilia. Filam. b. c. parte styli suprema columnam cylindricam inter lacinias perigonii sitam efformantia. Antherae extrorsae, biloculares, longitudinaliter dehiscentes. Pollen ovato-ellipticum utrinque acutum laeve. Ovarium inferum, triquetrum lin., triloculare. Ovula in loculis pauca, ovata obtusa biseriata subhorizontalia, anatropa. Stylus perigonii tubo adnatus superne tantum liberus et inter lacinias situs, cylindricus. Stigmata 3, petaloideo-dilatata, bilabiata, labio superiore maximo, bifido, inferiore brevissimo etiam bifido. Capsulam non vidi.

Generis nomen indicat coadunationem staminum cum pistillo.

1. GYNANDRIRIS SISYRINCHIUM Parl. l. c. p. 52.
Iris Sisyrinchium Linn. sp. pl. p. 59. caet.
Diaphane edulis Salisb.
Iris fugax Ten. fl. Nap. I. p. 15. tab. 4.
Moraea fugax Ten. fl. Nap. IV. p. 10.
Moraea Sisyrinchium Gawl. in bot. mag. tab. 1407.
Hab. in collib. et locis maritimis partis australis Europae. — Floret mense Apr. — Majo.

1220. SISYRINCHIUM *Linn.*

(Walp. Ann. III. 610.)

1. SISYRINCHIUM LONGISTYLUM. — Hort. Van Houtt. 1845. fasc. 1. p. 11.
(§ Androsolen Lem. staminibus in tubum distinctum connatis). Scapo subsimplici cylindrico; spathis bivalvibus 3—5 floris; petalis unguiculatis ovato-rotundatis recurvis; filamentis in longum tubum villosum connatis, antheris circulatim connexis; stylo in tubo libero vix exserto capitato; ovario trigono, ovulis biserialibus.

Planta glaucescens, Gladioli humilis cujusdam habitum praebens; rhizomate fibroso. — Hab. Imperium Chilense.

1. SISYRINCHIUM EXCISUM Godr. fl. Juv. ed. I. p. 39. ed. II. p. 108. — Fl. pedunculati, 2—5 aggregati et e spatha bivalvi erumpentes, exserti, pedunc. capillarib., spathae valvis parum inaequalib., marg. anguste membranac. et ap. acuto subulatis. Perig. caeruleo-violaceum, venosum, lacin. subaeq., extus pubesc-glandulosis, oblongis, ap. late excisis, utroq. lobulo laterali obtusiusculo, nervo dorsali in setam segmento triplo breviorem producto. Ovar. infer., subglobosum, pubesc-glandulosum. F. viridia, nervosa, tenuissime denseq. ciliolata, anguste lin., vers. ap. subulatum attenuata; radicalia equitantia, disticha, vers. b. marg. membranacea; caulina pauca (1 v. 2), b. vaginantia. Caul. graciles, erecti ancipites, ad angulos sub vitro ciliolati, ramosi ram. filiformib., elong., flexuosis, patulis, ap. spath. floriferam gerentib. Radix ... — Patr. ign.

2. SISYRINCHIUM NIGRICANS Gay. — Gay Fl. Chilena VI. p. 20.
Nigricans; caule foliac., simplici compresso; f. lin.-ensiformib., acutis striatis; spatha magna, elongata, b. inflata, 3—4 flora; fl. minutis subnervosis, ovario ochraceo rufo-villoso.

Species montana in Cordilleras de Coquimbo et Hurtada etc.

Icon addenda.

SISYRINCHIUM MAJALE Lk. Kltzsch. Otto. — Pxt. fl. gard. III. p. 29. xylog. 249.
Sisyrinchium graminifolium var. pum. bot. reg. t. 1914. (1915.)

1222. CIPURA *Aubl.*

(Walp. Ann. I. 815.)

1. CIPURA NORTHIANA Endl. mss. — Seem. in Endl. hort. Vind. tab. 6.
Vivipara, subbarbata, f. ensiformibus flabellatim distichis, caule alato-ensiformi toto ab involucri extima valva foliiformi concrete-vaginato, laciniis extimis subdeflexis.

Marica Northiana Gawl. in bot. mag. tab. 654. *Ferraria elegans* Salisb. *Moraea Northiana* Ker, Lodd., Schneevogt.

1224. MORAEA *Linn.*

(Walp. Ann. III. 611.)

1. MORAEA EDULIS Ker. — Fl. des serres X. tab. 1058. p. 215.
(Imberbis) involucris herbaceis, folio longissimo, corollae laminis

subconformibus: extimis duplo majoribus obovato-oblongis, stigmatib. assurgentibus incurvo-convergentibus, filamentis deorsum connatis.

M. edulis Ker in Ann. of bot. II. 241. et in bot. mag. sub folio 1103. pag. aversâ. — *Iris edulis* Linn. f., Thunb. et Willd. — *Iris Capensis* Burm. — *Iris longifolia* Schneev. — *Vieusseuxia fugax* de la Roche, caet.

Frequentissime in Africa australi.

2. MORAEA BICOLOR Spae. — Fl. des serres VIII. tab. 744. p. 273.

F. equitantibus lin-ensiformibus, scapo tereti sp. ramoso, spathis longis convolutis obtusis sepalis subrotundo-ovatis imberbibus b. maculatis, petalis minorib. oblongis undulatis patentibus unicoloribus.

Dietes bicolor Sweet hort. Brit. — *Iris bicolor* Lindl. bot. reg. 1404. — Lodd. bot cab. 1886.

1229. TIGRIDIA *Juss.*

(Walp. Ann. I. 830.)

Icones addendae.

TIGRIDIA PAVONIA Ker. var. *speciosa* et *conchiflora* Planch. — Flore des serres IX. tab. 908—910.

TIGRIDIA VIOLACEA Schiede et Schlechtdl. — Fl. de serres X. tab. 998. (icon ex Klotzsch iterata).

1229½. RIGIDELLA *Lindl.*

(Walp. Ann. III. 612.)

1. RIGIDELLA ORTHANTA Lindl. (Walp. Ann. I. 831. n. 4.) — Hort. Van Houtt. fasc. I. 1845. p. 5.

Elata robustissima, f. amplis profunde plicatis; fl. magnis erectis, nocturnis? segmentis internis gynandrum aequantibus seu paulo superantibus, scapo ramoso multifloro.

1239. GLADIOLUS *Linn.*

(Walp. Ann. III. 612.)

1. GLADIOLUS ALEPPICUS Boiss. — Boissier diagn. XIII. p. 13.

Gl. fibris tunicarum radicalium parallelis dense stipatis parce anastomosantibus areolis angustissimis foliis elongatis anguste linearibus superne longe attenuato-acuminatis 10—15 nerviis nervis parallelis inter se valde approximatis subaequalibus, floribus in spicam secundam approximatis, bracteis lanceolato-linearibus interiori dimidio breviori, perigonii rosei laciniis obovato-spathulatis basi longe attenuatis omnibus apice rotundatis superiori basi valde incurva, lateralibus duabus labii superioris et infima labii inferioris aliis brevioribus, antheris filamentum aequantibus aut eo sublongioribus, capsula ovata sexsulcata apice compressa, seminibus apteris.

Hab. in agris prope Aleppum Kotschy pl. Alepp. Kurd. Nr. 86. — Planta sesquipedalis folia inferiora fere pedalia 2—2½ lineas lata. Flores 6—7 magnitudinis eorum G. communis. Antherae circ. 7 lineas longae· ab omnibus generis speciebus Europaeis statim dignoscitur foliis ut in Gl. Persico duobusque sequentibus nervis aequalibus parallelis contiguis percursis dum in Gl. palustri, G. imbricato, G. segetum etc. nervi pauciores sunt et intermedius aliis crassior basin versus subita curvatione ad laterem interiorem folii flectitur. Gl. Persicus Boiss. eodem charactere foliorum donatus a Gl. Aleppico quantum ex speciminibus siccis dijudicare queo differt floribus minoribus subdistichis ,vix recurvis, perigonii laciniis oblongo-rhombeis acutiusculis, antheris filamento multo brevioribus. In eo insuper bracteae dilatatae et abbreviatae

sunt et tota pars superior plantae sub lente tuberculato-pruinosa sed hi characteres minus firmi videntur.

2. GLADIOLUS ATROVIOLACEUS Boiss. — Boissier l. c. p. 14.

Gl. fibris tunicarum radicalium parallelis dense stipatis parce anastomosantibus areolis subindistinctis, foliis glaucis cauli aequilongis vel longioribus linearibus acuminatis 10—12 nerviis nervis parallelis subaequidistantibus, floribus 3—7 in spicam brevem secundam approximatis ob tubum valde curvatum horizontalibus subcernuisve atroviolaceis, bracteis lanceolatis attenuato-acuminatis margine anguste scariosis exteriori tubum perigonii superanti, interiori tertia parte breviori, perigonii laciniis oblongo-spathulatis acutiusculis superiori valde curvata, tribus labii inferioris caeteras paulo superantibus, antheris filamento suo subbrevioribus apice attenuato-mucronatis, stigmatis laciniis a basi ad medium linearibus glabris dein subito in laminam spathulatam papillosam dilatatis, capsula ....

Hab. in Persia, circa Ispahan Aucher Nr. 5352, ad Teheran inter segetes Kotschy pl. Pers. bor. Nr. 28. — Pulchra species floribus in spicam brevem confertis valde incurvis G. imbricatum referens sed ob foliorum nervationem in sectione G. Persici et G. Aleppici collocanda, ab utroque colore et curvatione florum, spica conferta antheris mucronatis distincta. Pedalis, folia $1^1/_2$—2 lineas lata, flores eis G. imbricati paulo majores, antherae circiter 5 lineas longae.

3. GLADIOLUS HALOPHILUS Boiss. et Heldr. in pl. Anatol. exs. 1847. — Boissier l. c. p. 14.

G. fibris tunicarum radicalium crassis reticulatis areolis oblongis ellipticisve, foliis glaucescentibus anguste linearibus rigidis cordatis infimo caulem aequanti vel superanti caeteris brevioribus angustioribus, nervis 4—6 crassis aequidistantibus, floribus 1—5 spicam laxiusculam terminalem secundam formantibus, bracteis crassiusculis glaucescenti-rubellis elliptico-linearibus in mucronem acuminatum scariosum abeuntibus inferiori tubum corollae aequanti interiori subbreviori, perigonii rosei tubo incurvo laciniis obovatis obtusis lateralibus brevioribus, antheris incurvis filamento quarta parte brevioribus, stigmatis lobis sursum sensim spathulato-dilatatis, capsula ....

Hab. in salsis hyeme inundatis planitiei Koniah Isauriae in via inter Koniah et montem Karadagh (Heldr.). Fl. Junio. — Pedalis, folia inferiora lineam vel rarius sesquilineam lata, caetera multo angustiora. Flores illis Gl. palustris fere majores. Species foliorum nervatione praecedentibus approximanda ab eis foliis angustis duris, fibris radicalibus crassis areolatis, bracteis longe scarioso-acuminatis distinctissima.

4. GLADIOLUS KOTSCHYANUS Boiss. — Boissier l. c. p. 15.

Gl. fibris tunicarum radicalium parallelis dense stipatis anastomosantibus areolis angustissimis, foliis latiuscule linearibus longe acuminatis 5—6 nerviis nervis inaequaliter distantibus medio crassiori curvato, spicis subdistichis densis, bracteis linearibus cucullatis acuminatis late scarioso-marginatis inferioribus longissimis, perigonii tubo valde curvato laciniis omnibus ovato-spathulatis rotundatis basi longe attenuato-stipitatis labii superioris brevioribus, inferioris duabus lateralibus praesertim elongatis, antheris filamento eis fere duplo longiori suffultis, stigmatis lobis basi glabris supra medium subito in laminam ovatam ciliatam dilatatis, capsula ovata trigona apice non compressa, seminibus anguste alatis.

Hab. in Mesopotamia inter Suereck et Diarbekir Kotschy pl. Mesopot. Nr. 163. — Planta bipedalis. Folia 3—4 lineas lata. Flores in spica 6—8 magnitudinis eorum Gl. palustris. Perigonium e sicco basi intense violaceum versus laciniarum peripheriam pallescere videtur. Antherae $3^1/_2$ lineas longae. Affinis Gl. Illyrico qui differt peri-

gonii labiis subaequilongis, laciniis rhombeo-oblongis, tubo breviori. An tamen hujus speciei forma Orientalis sit ulterius inquirendum.

Icones addendae.

GLADIOLUS CARNEUS Jacq. — Saem. in Endl. hort. Vindob. tab. 7 (ubi Moraea ramosa errore). — *Gladiolus cuspidatus* bot. rep. tab. 147. — In Capite.

GLADIOLUS COMMUNIS. — Irmisch Naturf. V. I. tab. II. f. 1—4. — Varietates hortorum III. hort. (Lem.) IV. tab. 154.

GLADIOLUS PALUSTRIS. — Irm. Naturf. V. I. tab. II. f. 5—6.

GLADIOLUS NATALENSIS Reinw. (*Gl. psittacinus* Hook.). — Mag. of bot. I. p. 249. tab. 26.

1. var. roseo-purpureus.

2. var. Oldfordiensis.

3. var. Willmoreanus l. c. p. 189. tab. 18 et Fl. de serres VI. tab. 639.

GLADIOLUS var. hybr. Madem. Sosthéni. — Revue hort. Paris. 1858. tab. 3.

1243. IXIA *Linn.*

(Walp. Ann. III. 618.)

Icon addenda.

IXIA TRICOLOR var. — Revue hort. Par. 1853. p. 441. tab. 23.

1244. SPARAXIS *Ker.*

1. SPARAXIS JOUBERTI Loddig. (Delect. h. Dresd. 1853 et 1855.) est Montbretia xanthospila Fzl. (Gladiolus xanthospilus DC. in Redouté Lil., Tritonia xanthospila Ker e Spr. syst.) — Fenzl. dil. sem. h. bot. Vindob. 1855.

1247. ROMULEA *Maratti.*

1. ROMULEA HARTUNGII Parl. — Georg Hartung d. geogn. Verh. der Inseln Lanzarote u. Fuertaventura p. 143.

Scapo brevi, subbifloro, floris spathis subduplo longiore, perigonii laciniis lanc. acutiusculis filamentis anthera longiorib., glabris, staminib. perigonio breviorib., pistillo . . ., spathae valva superiore marg. late hyalino-membranaceo, seminib. angulatis, f. linearib., compressis, supra sulcatis, recurvis v. distortis, scapo multo longioribus.

Hab. ins. Lanzerota. Rom. grandiscapa (Trichonema grandiscapum Webb) quae in ins. Nivaria valde communis, differt scapo humili, flore minore filamentis anthera longiorib. et seminib. angulatis, et a Rom. Linaresii Parl., cui magis affinis, praecipue fl. majore, fauce glabra et lutea et filamenti aglabris. Nom. Romuleam retinui quia multo prius quam Trichonema evulgatum, Parl.

2. ROMULEA CROCEA Boiss. et Heldr. in pl. Anat. exs. 1847. — Boissier Diagn. XIII. p. 18.

R. foliis linearibus compressis striatis recurvo-patulis scapo multo longioribus, scapis unifloris ex eodem bulbo 1—3, spathae valvis subaequilongis exteriori herbacea pallide virenti parallele multinervi, interiori late membranaceo-marginata, perigonii crocei laciniis oblongis apice attenuatis acutiusculis exterioribus tribus extus anguste dorso violaceo-fuscescentibus, filamentis basi villosis, stigmatibus stamina longe superantibus perigonio vix brevioribus.

Hab. in pineto montis Solyma Lyciae prope pagum Karababir ubi cl. de Heldreich fine Martii eam legit. — Scapi 2—2½ pollicares, folia 4—6 lineas longa, flos e sicco fere pollicem longus.

Icon addenda.

ROMULEA ROSEA var. CELSII. — Planch. in Fl. d. serres. VIII. tab. 799 p. 183. — *Ixia chloroleuca* Venten. herb. exlus. syn. Jacq. (flos nullo modo ochroleucus, sed ex auct. ipso ut in icone nostra coloratus). — Hab. Caput bonae spei.

1247. TRICHONEMA *Ker.*

(Walp. Ann. I. 833.)

1. TRICHONEMA LINARESII Godr. et Gren. — Godr. et Gren. fl. de Fr. III. 238.
Romulea Linaresii Parl. fl. Palerm. I. p. 38; Bartol. fl. Ital. 4 p. 779; Gussone syn. I. p. 33. — *Romulea multiflora* Requien, ined.

Flores triplo spatha longiores. Perigonium imo in fauce purpureum, segm. lanc., fere acutis, omnib. venis purpureis numerosis anastomosantib. usque ad ap. segmentor. tendentib. percursis. Stamina pistillo longiora. Stigmata biloba. Caps....

F. angustissima, plicata, sulcata, flores multo superantia plerumque extrorsum recurvata. Scapi ramosi 2—4 flori. Bulbus ovoid. amplius. Planta 6 — 15 centimetr. — Hab. Bonifacio (Requien). ♃. Mart. Apr.

2. TRICHONEMA BULBOCODIUM. — Irmisch Naturf. V. 7. tab. II. fig. 7 — 16.

1248. CROCUS *Tournef.*

(Walp. Ann. III. 614.)

1. CROCUS VERNUS Tenore. — Tenore: memoria sulle specie di Crochi della Flora Nap. p. 5. tab. I.

Stigmate incluso 3-fido stamina subaequante, lobis cuneiformib., crenulato-incisis; corollae laciniis ovato-lanc., b. attenuatis, fauce piloso-glandulosa hyalina; filam. albis; spatha 1-valvi; f. lanc-linearib. synanthiis erectis; tunicis radicalib. fibrilloso-stupaceis.

Willd. sp. I. p. 195; Roem. et Schult. I. 367; Fl. Nap. Prodr. p. VII.

var. α. fl. minore, laciniis angustiorib., fauce villis prominulis; stigmatib. staminib. breviorib. — Redouté Lil. t. 266.; Jacq. Austr. App. t. 36; Sims. bot. mag. 2240. Engl. bot. 344.

C. vernus latifolius purpureus fl. minore Clus. hist. 203.
C. vernus coeruleus. Park. parad. 164.
C. vernus fl. purp. magno. Moris. Ox. hist. 2. § 4. t. 2 f. 3.
C. tuba brevissime trifida. Hall. Helv. n. 1257.

var. β. fl. purpureo majori serotino; pet. interiorib. pallidiorib., pilis in fauce obsoletis, stigmatib. antheras superantib. v. aequantib.

C. Neapolitanus. Sims. bot. mag. 860.
C. vernus coeruleus. Park. parad.
C. vernus latifolius purpureus III. species, fl. majore, Clus. l. c. p. 204.

var. α. In Aprutii citerioris montium cacumine (5 — 6000'). — var. β. in montibus Lucaniae (4 — 5000' alt.) — Floret Jun. — Jul.

var. *Leedsii* Gardn. mag. of bot. III. 1851. p. 305. c. tab.

2. CROCUS PUSILLUS Ten. — Tenore in memoria l. c. p. 8. tab. II.

Stigmate incluso 3-fido, lob. cuneiformib., crenulato-incisis; corollae laciniis ovato-oblongis obtusis, conniventib. erectis; fauce nuda; spatha bivalvi, uniflora; f. linearib., synanthiis erecto-recurvis, linea alba exaratis, tunicis radicalib. membranac. laevibus.

Ten. Cat. H. hort. Nap. 1813 p. 31; Roem. et Schult. mant. 1. p. 24.

var. α. petalis interioribus albis, fauce lutescente.

var. β. pet. interiorib. pallide coeruleis, fauce hyalina, unguib. laciniar. interior. maculis rhombeis fuscis pictis.

C. vernus var. pusillus Ten. fl. Nap. pr. p. XI.
C. minimus Ten. fl. medic. univ. t. I. p. 24. (non DC.)
C. lineatus Jan. (fide speciminis).
C. vernus minor Sebast. et Mauri fl. Rom. p. 16.

C. sativus var. minor Savi Fl. Pisana I. p. 30.
C. vernus purpureus striis virgato flore J. B. hist. 2. p. 642.
C. verni var. elegantior. Jungermanni ap. Clus. hist. p. 204.
C. silvestris vernalis minor prior. Dod. pempt. 215.
Habit. in pratis sterilib. collium c. Neap. — Cfr. l. c. descript.

3. CROCUS IMPERATI Tenore. — Tenore in memoria l. c. p. 10. tab. III.

Stigmate incluso trifido; staminib. longiore, lobis cuneiformib incisis crenulatis; corollae laciniis lato-ellipticis, obtusis subemarginatis, intus concolorib. violaceo-purpureis, fauce nuda aurantiaca; spatha bivalvi, f. hyperanthiis linearib. crassis revolutis, costa alba canaliculatis, tunicis radicalib. membranaceo-filamentosis.

C. verni var. Tenore in litt.
C. minimi var. Gay in litt.
C. Neapolit. Ten. in litt. et ad Catal. semin. 1825.
C. vernus latifolius purpureus versicolore flore quinta species Clus. hist. 205. tab. 2; Bauh. hist. 2 p. 643?
Habit. in montib. Calabriis, a 6 m. ad 3 m. ped. altitud. — Fl. Febr. Mart.

4. CROCUS THOMASII Tenore. — Tenore in memoria l. c. p. 12. tab. IV.

Stigmatib. odoris erectis inclusis, stamina subaequantib., tripartitis, lacin. sublinearib. truncatis, corollae tubo limbo longiore; laciniis ovato-lanc., obtusis concolorib., venis saturatioribus, fauce hyalina villoso-glandulosa; spatha bivalvi; f. linearib. erectis hyperanthiis marg. ciliato-glandulosis; tunicis radicalib. stupaceo-fibrosis.

C. sativus Ten. fl. Nap. pr., e fl. medic. univ. I. p. 12.
C. sativus Thomas in litt.
An C. Neapolitanus Hoppe, non Sims.?
An C. montanus autumnalis Portae Bauh. Pin. p. 65?
A C. serotino et a C. odoro diff. corollae tubo foliis breviore; stigmatib. simplicib.; spatha bivalvi; corollae laciniis angustiorib.
A C. Pallasii diff. f. ante florem prodeuntib.; corollae tubo breviore; stigmatib. simplicissimis.
A C. autumnali Milleri diff. spatha diphylla, corollae tubo intus villoso, foliisq. ante florem prodeuntib.
Hab. in nemorib. Calabriae ulterioris. Fl. Octbr. — Cfr. l. c. descr. nat.

5. CROCUS KOTSCHYANUS C. Koch. (*Ilnocromyon* C. Koch in Linn. XXI, 632). — Ind. sem. h. Berol. 1853.

Bulbus e vertice et basi compressiusculus, tunica brunnea rimis inaequalibus denique soluta leviter striata vestitus. Folia sub anthesi autumnali nulla, proximo vere erumpentia. Perianthii infundibuliformis limbus basi extus flavescens, ceterum dilute coeruleus; laciniae oblongae, obtusae, nervis 5—7 coeruleis longitudinalibus et basi macula aurea bicrurali instructae, organa sexualia paene duplo superantes. Antherae elongatae, angustae, basi sagittatae, filamentis aureis quadruplo longiores. Stylus gracilis trifidus, laciniis aureis.

C. nudifloro Sm. et C. sativo L. proximus, sed per omnes partes minor. Cl. peregrinator Th. Kotschy hanc speciem in montibus Tauri detexit et hortulanus Erfordiensis Moschkowitz et Siegling bulbis impertivit, qui cum horto botanico nuper communicavit. (C. K.)

6. CROCUS HERBERTIANUS Koernike. — Tunica parallelo-fibrosa; foliis hysteranthiis; floribus 1—2 autumnalibus; petalis quam sepala duplo fere minoribus, obtusiusculis, tubuloso-imbricativis. — Bulbi subglobosi. Tunicae autumno tenuissimae, fibris parallelis compositae, fuscescentes. Vaginae infimae obtusissimae, mediae cucullato-acutae, summae obtusissimae et retusae, omnes appressae et albidae. Folia

vere sequente egrediuntur. Longitudo plantae a bulbo usque ad apicem floris 10—11-pollicaris. Scapus brevis, 1—2-florus, apice vagina (spathe) tenui-membranacea albida tota inclusa ornatus, $2^1/_2$—4 linearis. Pedicelli circiter 7-lineares. Germen ad basin vagina reliquas superante cinctum. Tubus lilacino-albidus. Faux glabra, pallide lilacina. Sepala 3, rhombeo-ovata, obtusiuscula, apice breviter retusa, valde concava, fere rectangulariter patentia, lilacina, concoloria, rarius (morbosa) albido-striata, circiter 17 lineas longa, $14^1/_2$ lineas lata. Petala 3, sepalis dimidio fere breviora et angustiora, erecta, tubuloso-imbricativa, ovata, obtusiuscula, retusa, albido-lilacina, versus apicem nervis 3 paullo obscurioribus leviter striata, $10^1/_2$ lineas longa, 8 lineas lata. Stamina 3, petalis paullo longiora; antherae basi patenti-sagittatae, demum introrsae, flavae, filamentorum parte libera multo longiores, 10—11-lineares. Stylus usque ad medium antherarum trifidus. Stigmata multifida, antheras parum superantia, lilacina. — A Croco banatico Gay (iridifloro Heuff.) proximo differt praesertim petalis obtusiusculis, nec acuminatis, porro sepalis petalisque pro ratione longitudinis latioribus, qua re flos habitum alienum prae se fert; denique antheris petala paullo superantibus (nec quam ea brevioribus) stigmatibusque quam antherae parum (non multo) longioribus. — A Cr. Kotschyano C. Koch differt stylo multifido lilacino (nec trifido aureo) aliisque notis. — Colitur in horto regio Berolinensi, Croci iridiflori minoris nomine olim designatus.

7. CROCUS DISCOLOR Reuss. — Reuss, Kwetna Slowenska 1853. — Oestr. W. Bl. 1854 p. 405.

Spatha biphylla; perigonii faux laevis. Stigmata trifida, laciniis infundibuliformib., valde fissis, perigonium longitudinem vix aequantib. Fibrillae tunicae bulbi piliformes, reticulum formantes ostiis angustis.

♃. In pratis alpinis Slawoniae Apr. Maj. (An C. variegatus Hoppe?).

8. CROCUS PESTALOZZAE. — Boissier l. c.

Cr. bulbi vaginis cartilagineo-membranaceis fuscis laevibus, foliis synanthiis flores superantibus lineari-setaceis rigidulis margine scabridulis superne 5 nerviis subtus linea alba angusta percursis, floribus 1—3, spathae diphyllae phyllis pellucidis obtusis, perigonio (e sicco) albido basi flavescenti laciniis oblongis obtusis, staminibus perigonio tertia parte brevioribus stigmati aequilongis, stigmatibus aurantiacis linearibus superne subdilatatis plicato-carinatis apice truncatis integris.

Hab. in Bithynia prope Bolu, Pestalozza. — Folia 2—5 pollices longa lineae ½ lata, flores minores eis Cr. Boryi cui inter omnes florum coloratione tunicarumque structura magis congruit sed Cr. Boryi differt foliis abbreviatis trinerviis, spathae phyllis acutis, stigmatibus multifidis.

9. CROCUS CANDIDUS Clarke. — Boissier diagn. pl. n. XIII. p. 17.

Cr. tunicis radicalibus tenuissime intertexto-fibrillosis, foliis synanthiis flores aequantibus strictis lineari-setaceis utrinque concoloribus, spatha pellucida diphylla phyllis acutissimis longiori saepe bifida, perigonii (e sicco albi) laciniis oblongis obtusiusculis, staminibus perigonio dimidio brevioribus, stigmatibus antheras superantibus intense aurantiacis multifidis.

Hab. in Ciliciae montibus Aucher n. 2129. — Planta 4 pollicaris, flores 1—3 magnitudinis eorum C. biflori. Affinis praesertim C. Boryi et C. laevigato B. et Ch. ab utroque differt tunicis non laevibus membranaceis sed e fibris tenuissimis angulo fere recto intertextis constantibus. Brevi descriptioni plantae Clarkianae omnino convenit.

10. CROCUS AUCHERI Boiss. — Boissier diagn. pl. nov. XIII. p. 16.

Cr. tunicis radicalibus...., foliis synanthiis latiusculis tubum floris aequantibus inferne margine parce ciliatulis, bulbo 1—3 floro, spathae diphyllae phyllis subaequalibus acuminatis longitudinaliter plicatis, perigonii crocei tubo elongato, fauce nuda, laciniis oblongis, antheris peri-

genio tertia parte brevioribus, stigmatibus antheras aequantibus ultra medium 2—3 partitis laciniis tenuissimis apice vix incrassatis integris.

In Asia minori circa Guesive Aucher n. 5849. — Habitus omnino Cr. aurei a quo et attamen foliis ciliatalis, stigmatibus setaceo-multifidis nec apice incrassatis crenatis statim dignoscitur. Habeo specimina ex Argolide ab amicis. Spruner missa huic speciei foliorum latitudine et spathae forma omnino consentientia sed in eis antheras stigmataque nimia compressione destructa non videre licuit.

11. CROCUS THESSALUS Boiss. et Spruner. — Boissier diagn. XIII. p. 17.

Cr. tunicis radicalibus stipatim fibroso-intertextis areolis angustissimis, foliis synanthiis flore paulo brevioribus linearibus brevibus superne albo-vittatis, spatha diphylla abyllis subaequalibus pellucidis, perigonii rosei laciniis oblongis obtusiusculis, staminibus corolla dimidio brevioribus, stylo longe tripartito, stigmatibus antheras subsuperantibus apice dilatato denticulatis.

Hab. in monte Aeta Thessaliae (Spruner). Floret verisimiliter vere. Planta florifera 2—3 pollicaris, folia per anthesin abbreviata latitudinis eorum Cr. verni. Flos colore Colchicum autumnale referens in genere parvus. E grege specierum stylo profunde tripartito stigmatibus non multifidis donatarum. Inter eas C. variegatus a nostra differt flore duplo majori variegato, tunicis radicalibus reticulatis. C. Imperati eadem florum magnitudine et colore, stigmatibus profunde fimbriatis; C. versicolor stigmatibus subintegris, tunicis radicalibus membranaceis; C. Pallasii foliis hirtis stigmatibusque integris.

12. CROCUS .... n. sp., G. Belke, Bullet. de Mosc. 1853. XXVI. I. p. 162. — Perianthio subcampanulato corollam tubulosum formante; laciniis sex obovato-lanceolatis, obtusis, tribus integris, tribus vero apicibus obsolete emarginatis, pallide violaceis; singulis macula apicali subcordiformi, obscure violacea notatis. Nervo medio, simplici, per totam longitudinem laciniae transeunte; nervis basalibus brevibus, numerosis. Tubulo longissimo, supra colorato, infra vero ex virescente-albo, in scapo desinente. Staminibus stigmate brevioribus, luteis, basi undique glabris, non barbatis. Stigmatibus aurantiis profunde tripartitis; laciniis subtubulosis, laceratocrispis. Spathis duabus albis, tubulum et scapum amplectentibus. Foliis duobus, rare tribus, lineari-lanceolatis, laete viridibus; nervo medio glabro, albo, per totam longitudinem folii, lamina non exclusa, transeunte, pagina inferna costam prominulam utrinque unicanaliculatam formante. Scapo unifloro, brevi vix quintam partem longitudinis tubuli corollae aequante. Bulbo supra basin nodoso-circumscisso interne albo, solido; tunica filamentosa. Altitudo 5—11 pollicem. Floret vix unam septimanam; primo vere inter 28. Februarii et 25. Martii. Kamenaiec — Podolski.

Icones addendae.

CROCUS SATIVUS Lin. — C. Berg et Schmidt Offizin. Gew. Heft I. tab. 1 d.
CROCUS CARTWRIGHTIANUS, Herbert. — Magaz. of bot. I. p. 273. tab. 27. — Divis.: nudiflori sect. parallelo-fibrosi.
CROCUS PULCHELLUS Herbert. — Mag. of bot. I. c. tab. 29.
CROCUS BORYANUS, Gay. — Mag. of bot. tab. 29.
Syn. *Crocus Ionicus*, Herb., *Cr. veneris* Tappeiner, *Cr. Caspius* Fischer in herb. — A. H.

1226. IRIS *Linn.*

(Walp. Ann. I. 816 et III. 611.)

Parlatore nuovi generi et specie di piante monocotyled. 1854. p. 34. — Iridis species Tournef., caet.

1. IRIS ITALICA Parl. l. c. p. 37.

Scapo cylindrico breviusculo, foliis longiore, 1-floro, flore breviter pedunculato, perigonii tubo ovario duplo longiore, laciniis subduplo bre-

viore, bracteas subaequante, laciniis longitudine et latitudine subaequalibus, spathulatis, ap. rotundatis, subcrenulatis. interiorib. elliptico-oblongis, tertio inferiore valde angustatis, ap. obtusis, subrotundatis, subintegris, bracteis apicem versus scariosis acutis subinflatis, foliis ensiformibus brevib. erectis glaucis, rhizomate repente.

Iris pumila Savi bot. etrusc. II. p. 10.; Bert. fl. it. I. p. 235. var. a. Puccin. syn. fl. luc. p. 28, var. a. exclus. ab omnib. syn. Linn. et plur. auctor. — var. b. flore flavo. — *Iris pumila* δ. *Puccin*. l. c.

Hab.: In Liguria or. pr. Lucca, Pisa, var b. legit pr. Lucca Puccinelli.

2. IRIS PUMILA Linn. (Linn. sp. pl. p. 56). — Parlatore nuovi generi e specie di piante monocotyled. 1854. p. 40.

3. IRIS NEGLECTA Parl. — Parlatroe l. c. p. 41.

Scapo cylindrico, brevi, foliis breviore, unifloro, flore subsessili, perigonii tubi breviusculo, ovario subduplo longiore, laciniis breviore, bracteis paulo longiore, laciniis longitudine subinaequalibus, exteriorib. paulo breviorib., oblonge spathulatis, ap. obtuso-rotundatis, crenulatis, interiorib. lato-ellipticis, tertio inferiore valde angustatis, ap. rotundatis, marg. undulatis, bracteis apicem versus scariosis acutis, fol. ensiformib. brevib. erectis glaucis, rhizomate repente.

Culta in horto bot. mus. Florentini; patria ignota.

4. IRIS FALCIFOLIA Bge. — Bunge Al. Lehm. reliq. bot. p. 329.

J. (Hexapogon: laciniis perigonii omnibus barbatis) rhizomate repente articulato, scapo bi-trifloro, f. ensifloribus linearib. falcato-recurvis scapo brevioribus, spathis vegetis scabriusculis, fl. pedicellatis, perigonii tubo exserto limbum superante, laciniis omnib. barbatis exterioribus dimidio angustioribus, capsula...

Hab. in deserto Buchare et Kermine m. Mart. fl. Species c. sequente ab omnib. mihi notis facillime distincta laciniis perigonii etiam interioribus barbatis, praeter J. Susianam cujus laciniae internae ungue hirsutae dicuntur, in hac vero laciniae interiores latiores. — Rhiz. repens abbreviatum; caet.

5. IRIS FILIFOLIA Bge. l. c. p. 330.

J. (Hexapogon) rhizomate repente articulato, scapo 1—2 floro, f. filiformibus subcurvatis, scapum multo superantibus, spathis submembranaceis acuminatis, fl. pedicellatis; perigonii tubo vix exserto limbum subaequante, laciniis exteriorib. oblongis late denseque interiorib. angustioribus parcissime barbatis, caps. trigona, acuta.

Hab. in deserto argillaceo inter Tshakir-ata et Nasarbai-Chuduk, caet. — Fl. Apr. et Majo. — A praecedenti proxime affini distinguitur f. caulinis multo longioribus angustioribus, caet.

6. IRIS SOGDIANA Bge. l. c. p. 331. — Hort. Dorpat. in Linn. 1850. p. 206.

J. (Xyridion) caule subquadrifloro tereti foliis breviore, spathis vegetis acutis carinatis; carina ciliolato-scabra, fl. (lilacinis) pedicellatis, pedicello tereti, ovario longe rostrato, corollae tubo obconico brevi, laciniis perigonii exteriorib. patentibus spathulatis, interioribus erectis obovato-oblongis emarginatis, capsulae in rostrum aequilongum attenuatae ovatae hexagonae faciebus alternis angustioribus, seminibus utrinque planis integumento lateribus laxe corrugato-lucido.

Habit. haud procul Kermine pr. Melik; m. Aug. specimina fructu maturo; in horto sub finem Junii mensis floret.

I. spuriae et *nothae* affinis, ab utraque differt caule foliis breviore, florib. multo minoribus; ab *I. spuria* insupera capsula longe rostrata, ab *I. notha* pedicellis teretibus nec triquetris, capsulae angulis alternis approximatis, ab *I. halophila* et *Güldenstaedtii* florum colore distinguenda.

7. IRIS DIERINCKII Hort. Berol. — Ind. h. Berol. 1858. (Xyridion Tausch.)

Rhizoma horizontale, crassum, annulatum; folia radicalia et caulina ensiformia, 1—1 $^{1}/_{2}$ pedalia, apice sensim attenuata, lanceolata, nervosa, sed nervis minime prominentibus, margine angusto pellucida, pruina subglaucescente obtecta. Caulis foliosus, teres, simplex, biflorus. Spatha bivalvis, viridis, sed margine et apice marcescens, ovarium obtuse trigonum attingens. Tubus perigonii brevis, crateriformis, ovario triplo brevior; laciniae exteriores recurvato-horizontales, lamina oblonga, superne violaceo-coerulea, obscure violaceo striato-reticulata, disco luteo ovato praedita, unguem brunneo-striatum aequante; laciniae interiores erectae violaceo-coeruleae, obovato-spathulatae, obscure coeruleo-striatae, stigma albido-coeruleum apice incurvum et irregulariter dentato-serratum aequantes.

Sub hoc nomine allata, forte Africae borealis aut Europae austro-occidentalis civis, Iridi spuriae L. affinis, sed omnibus partibus minor. Florum habitu atque colore magis ad I. sibiricam L. accedit, sed rhizomate horizontali haud aegre distinguitur. (C. K.)

8. IRIS TRIGONOCARPA A. Br., C. K. et Bouché. — In ind. sem. h. Berol. 1853. (Eremiris Spach.)

Rhizomate breviter repente stolonifero stuposo; foliis ensiformibus anguste linearibus strictis; caule folia rhizomatis superante 2—3 folio, 1—3 floro; spatha e vaginis binis oblongis exteriore acuta, interiore obtusa; flore terminali brevius, lateralibus longius pedicellatis; perigonii tubo brevissimo, limbi laciniis exterioribus leniter recurvatis, lamina oblonga ungue dilatato breviore et non multo latiore, interioribus erectis paulo brevioribus anguste ellipticis, basi in unguem brevem attenuatis; ovario trigono, lateribus depressis, fructu triquetro, angulis acute carinatis, lateribus medio canaliculatis vix tumidis.

Species e seminibus sibiricis in horto culta, I. sibiricae et fructus structura praesertim I. prismaticae Pursh (carolinianae Hort. nonn.) affinis, sed humilior et laxius caespitosa, rhizomate stolonifero ab utraque distincta. — Rhizoma breviter repens, adscendens, foliorum rudimentis elongatis, laceris, fuscis stupposum, passim stolones emittens 1—3 pollicares, linea vix crassiores, horizontales vel oblique descendentes, apice denuo adscendentes et in rhizomata foliifera incrassatos. Folia viridia, vix glaucescentia, 1—2 lineas lata, nervis elevatis lineata, tenuissime marginata et margine vix pellucida. Caulis 1—1$^{1}/_{2}$ pedalis, rarius altior, saepius flexuosus, teres. Vaginae involucri (spathae) fuscescentes, vix pollicares. Pedicellus floris terminalis vix semipollicaris, florum lateralium 1—1$^{1}/_{2}$ pollicaris. Flores iis Iridis sibiricae paulo minores; perigonii laciniae exteriores albo et coeruleo variegatae, apice intensius coeruleae; interiores violaceo-coeruleae. Stigmata lacinias interiores aequantia, late-linearia, leniter recurvata, pallide coeruleo-violacea, apice incurva et dentata. Fructus quam in I. sibirica minor, minus tumidus, basi et apice magis attenuatus. (A. Br. et C. K.)

9. IRIS (*Pogoniris*) JUNONIA Schott et Kotschy. — Schott in Oestr. bot. W. Bl. 1854. p. 209. — Foliis subarcuato-ensiformib., a medio dilatato basin versus angustatis, ap. acuminatis, utrinq. elevato-striatis glaucescentib.; caule foliis altiore ramoso (2-pedali); spathis bractescentib. supra $^{1}/_{2}$ scariosis; latis obtusis, perigonio longe et crasse tubuloso; sepalis exteriorib. arcuatim recurvis, late oblongo-obovatis, ap. rotundatis, b. versus late cuneato-angustatis, barba intense lutea ad exitum pallente barbatis, ad $^{1}/_{2}$ usque pallidissimis, externe sanguineo punctato-striolatis, interne venis remotis interrupte dichotomis patentib. et patentissimis, ferrugineis, notatis, reliqua parte apicali ex purpureo violascentibus, sensimq. pallidiorib.; sep. interiorib. erectis, arcuatim conniventib., unguiculatis, ungue $^{3}/_{4}$ pollicari externe viridi, interne ex flavo pallescenti, c. lamina rotunda ovali, ap. retusa, b. repentino contracta, disco concaviusculo; $2^{3}/_{4}$ poll. lato, $2^{1}/_{2}$ p. longo, pallide et amoene violaceo infima basi patentissime ferrugineo-venoso, externe sanguineo-punctato-striolato; filamentis

inferne sparse et pallide sanguineo-punctatis, antheris (apertis) lanceolato-linearib. b. sagittatis, ap. acutiusculis; ovario tubo breviore; stigmatib. albentib. fere bipollicarib., ¾ pollicis latis, oblongis, b. versus lineo extrorsum arcuata angustatis, arcuatis; fornicatis, appendicib. lacerato-incisis majusculis, c. stigmatum parte costali pallide violascentibus. — Odor floris suavis. — Hab. in Tauro Ciliciae (Kotschy).

10. IRIS SUBBARBATA Joo. — Mittheilg. d. siebenbürg. Vereins 1851. II. p. 96. — F. linearibus glaucescentibus rectiusculis, infimis falcatis, caule subcompresso plurifloro brevioribus, germine rostrato hexagono. Laciniae exteriores divergentes, expansae, ungue angusto, concavo, subito contracto c. barba flava exigue prominula, flavo, venis purpureis lineato in laminam ovatam obtusam violaceam venis saturatioribus lineatam desinentes; interiores erectae obovato-lanceolatae emarginatae, crispae c. stigmatibus concolores violaceae. Spatha acuta marginibus membranaceis marcescentibus. Caps. oblonga inaequaliter hexagona. F. caulina brevia foetida. Rhizoma tumidulo-annulatum rubro-fuscum. — In collib. graminosis; siccis transylvanicis Claudiopolitanis, apricis.

11. IRIS STYLOSA Poir. var. *angustifolia* Boiss. et Heldr. — Boissier diagn. pl. nov. XIII. p. 15.

Planta plerumque humilior 5—8 pollicaris, folia spatha angustiora ½—1 lineam lata margine manifestius scabrida, caeterum omnia speciei.

Hab. in Attica (Heldr.), Argolide (Spruner), Achaia (Boiss.), Rhodo, Cypro, Creta (Heldr.), Caria (Pinard).

12. IRIS SUAVEOLENS Boiss. et Reut. (Sect. *Barbatae*.) — Boissier l. c. p. 15.

I. pumila, foliis ensiformibus glaucescentibus subfalcatis caule foliis breviori unifloro spathae bivalvis valvis vix inflatis subaequilongis perianthii tubo paulo brevioribus vel ei aequalibus, extera interiori duplo latiori tota herbacea margine vix membranacea dorso subalato-carinata, interiori apice membranaceo-scariosa, perianthii tubo tereti obscure trisulcato limbo triente longiori livide virescenti, laciniis virenti-ochroleucis basi extus virentibus exterioribus cuneato-oblongis apice rotundatis leviter emarginatis in medio limbi reflexi macula ovata livide caeruleo-violacea instructis, barba concolore, laciniis interioribus paulo latioribus oblongis apice obtuso emarginatis margine undulato-crispis basi subito in unguiculum contractis, stigmatibus oblongo-spathulatis cristis semiovatis apice acuminatis latere exteriori denticulatis.

Hab. in planitiebus Bulgariae prope Kustendje (Boiss.). Inde relata fuerunt rhizomata ex quibus plantam coluimus descripsimusque. — Caules 3—5 pollicares, folia primum brevia tandem circiter pedalia. Flores fragrantissimi iis I. pumilae dimidio minores. Odor florum eum Asperulae odoratae exsiccatae referens. Affinis I. pumilae differt floribus minoribus odoratissimis, perianthii laciniis inter se subinaequalibus constanter ochroleucis exterioribus macula ovata notatis, spatha vix inflata praeter apicem subscariosum tota herbacea valva exteriori dorso carinato-alata.

13. IRIS TRIFLORA Balb. — v. Schlechtend. in Linn. XXVI. p. 465. — Descriptio nova.

Icones addendae.

IRIS PERSICA Linn. (*Xiphium*). — Fl. d. serres X. tab. 1045.
IRIS SIBIRICA. — Irmisch Naturf. V. I. tab. II. f. 17—23.
IRIS XIPHIUM. — Irmisch l. c. tab. II. f. 24—30.

1226/1. HERMODACTYLUS *Tourn.*

(Walp. Ann. I. 816.)

Parlatore nuovi generi e specie di piante monocotyl. 1854. p. 45. — Tournef. coroll. p. 50. Salisb. in transact. of the hortic. soc. 1. p. 304. ubi nomen tantum. — Iridis species, Linn. sp. p. 1. p. 58 et auctor. — (Cfr. Walp. Ann. I. 816.)

Perig. corollinum superum irregulare, tubo brevi recto, limbo sexpartito, laciniis valde inaequalib., 3 exteriorib. majoribus, ap. reflexis, nudis, 3 interiorib. minimis, erecto-patentibus. Stam. 3 basi laciniar. perigonii exteriorum inserta. Filam. lin.-subulata plana. Antherae lin., longae, ap. integrae, mucronulatae, b. bifida affixae, extrorsae, longitudinaliter dehiscentes. Pollen ellipticum obtusum laeve. Ovar. inferum, oblongum, subinflatum, 1-loculare, valvis medio breviter septiferis. Ovula plurima, obovata, biseriata, serieb. divergentibus, horizontalia, anatropa. Stylus brevis, triqueter crassus maxima ex parte perigonii tubo adnatus. Stigmata 3, petaloideo-dilatata, supra carinata, subtus canaliculata, bilabiata, labio superiore majore bifido, inferiore brevissimo, etiam bifido. Capsula membranacea, oblonga, subinflata, ap. loculicido-trivalvis, 1-locularis. Sem. plurima, subglobosa, testa laxiuscula ap. valde gelatinoso-incrassata, hilo minuto, basilari. Embryo minutus ovatus rectus, albumine corneo pr. hilum exclusus, extremitate radiculari hilum attingente.

1. HERMODACTYLUS TUBEROSUS Salisb. l. c. — Parlatore l. c. p. 47. — Hab. in collibus et locis silvaticis Europae meridionalis, in Hispania, Gallia, Italia, Sicilia, Graecia, in Oriente et in Arabia. Fl. Martio — Aprili ⊙.

Ordo XIX. AMARYLLIDEAE *R. Br.* *)

(Knth. en. V. 467. — Walp. Ann. III. 615.)

Subordo I.

AMARYLLIDEAE LEGITIMAE Kth.

(Knth. en. V. 469. — Walp. Ann. III. 615.)

Griff. Ic. pl. As. III. (1851) tab. 278.

Tribus I. *GALANTHEAE* Herb.; Knth. l. c.

Tribus II. *AMARYLLINEAE* Knth. l. c. 478.

EUCHARIS *Planch.*

Flore des serres VIII. tab. 788. p. 107.

Perianthii b. c. ovario concreti tubo a b. leviter incurvo, inferne angusto superne sensim infundibuliformi, limbi 6-partiti laciniis revoluto-expansis, exteriorib. interiorib. lanc-ellipticis angustioribus. Corona subcampanulata perianthii fauci inserta, ad tertiam partem 6 fida, divisuris latis ap. subbilobo-truncatis, inter dentes obtusos staminiferis, filamenti pars libera late subulata, recta, antherae lin-oblongae, supra b. bifidam dorso insertae, dem. versatiles, biloculares, rima duplici longitudinaliter dehiscentes. Stylus filiformis exsertus; stigma vix dilatatum, trilobulatum. Ovar. obtuse trilobum, triloculare, ovulis 2 anatropa angulo

*) Numeri latinis typis signati, qui generibus comitantur ad ordinem spectant quem celeberr. Kunthius in enumeratione sua plantarum sequutus est.

interno horizontalit. superpositeque affixis. Caps. (immatura) alte triloba, lobis gibbosis, a latere compressiusculis, verosimiliter abortu monospermis.

Herba Novo-Granatensis, bulbosa glaberrima bulbo ovato-oblongo, sq. completis tunicato. F. unicum, floribus coëtaneum, longiuscule petiolatum, petiolo antice plano, lamina late elliptica acuminata, b. in petiolum decurrente, costa media subtus obtuse prominente, nervis utrinq. 10 et ultra incurvis b. apiceque conniventib., invicem nervulis transversis connexis, pag. supera atro-viridi infera pallidiore. Scap. 2-ped. folio longior, superne compressiusculus, ap. umbella 8—10 flora ornatus, spathis pluribus, lin-lanc. v. linearibus marcescentibus, pedicellis 8—18 lin. longis floribus candidis (corona b. lutescente), vix odoratis. — Eucharis Planch. in Lind. Cat. hort. ann. 1852. — Species unica:

1. EUCHARIS CANDIDA Planch. et Lind. — Fl. des serres l. c. tab. 788. — E Nova-Granata a cel. Schlim in hortum Lindenianum introducta, ubi prima floruit anno 1851.

2. EUCHARIS GRANDIFLORA Planch. et Lind. — Fl. des serres tab. 957. p. 255.

F. in stirpe florifera 2—4, scapo 3—5 floro, perigonii laciniis exteriorib. ovato-lanceolatis interiora latitudine excedentibus, ovario ellipsoideo oblongo, ovulis in loculo singulo circiter 18.

Euch. grandiflora Planch. et Linden. Fl. Columb. inedit.

Planta facie Eucharidis candidae a qua facillime distinguitur: f. latioribus b. complicato-subcordatis nec sens. in petiolum attenuatis, fl. fere duplo majoribus, ovario oblongo nec subgloboso, ovulis in loculo singulo circiter 16—18 nec 2. — Herba tota glaberrima, caet. — Hab. in regno Nova-Granatensi, in prov. Choco; Triana primus plantam illam pulchram in hortos introduxit.

3. EUCHARIS AMAZONICA Lind. cat. 1856. — Lemaire illustr. hort. IV. tab. 142. — Bulbo magnitud. ovi anserini b. prolifero, tunicis brunneis, f. 2—3 postfloralib. v. subcoaetaneis, petiolis crassis erecto-curvatis infra rotundatis supra subplanis et etiam versus ap. subcanaliculatis limbo pallidioribus, 0,15—20 longis, limbo amplo b. subcordato, lobis subelevatis dein ovato-lanceolato ap. acutato v. breviter acuminato longitudinem petioli aequante 0,08—11 lat., nervis utroq. latere 10 supra obsolete costiformibus infra linea saturatius viridi indicatis immersis ap. basique confluentibus, interpositis minimis obsoletissimis, mediano carinato. Amito robusto erecto cylindraceo foliis multo longiore 6—7 floro (W. Hook.) — Spatha triphylla (an serius ob florum numerum majorem polyphylla? hanc dixit solummodo bifidam cl. Hooker); segmentis b. quadrata lanceolato-acuminatis ap. inflatulo-mucronatis dein membranaceo-marcescentibus; pedicellis brevissimis (vix 0,01) trigonis cylindraceis unoquoque bractea (spathella) lin-subulata stipato; perigonii tubo cylindrico de basi angusto curvato sensim infundibuliformi-dilatato (0,05½ longo); limbi amplissimi patuli segmentis 6 externa 3 longiora b. cordatim expansa in tubum ultra basim lata (? !) abrupte confluentia, interna 3 alternantia eodem modo inserta paulo latiora, marginibus inferiora operientibus exacte ovata; omnib. crassiusculis costato-venatis ap. inflatulo mucronatis Corona succulenta late tubulata, 0,025 alta 12-dentata dentib. antheriferis alternatis plano subulatis longioribus linea viridula interna notatis; antheris oblongis subbasifixis, polline albido; stylo exserto gracili et debili stigmate late capitatim tripartito expanso intus 3-plicato papilloso. Florib. suavissime fragrantibus.

Eucharis Amazonica Lind. Cat. 1856. — W. Hook. bot. mag. tab. 4971, sphalmate sub nomine: *E. grandiflora* quae species alia satis a praesenti diversa. —

Peruvia, Brasilia et Nova-Granata.

V. COOPERIA *Herbert.*

(Knth. en. V. 478.)

Icon addenda.

COOPERIA PEDUNCULATA. — Decaisne, revue hort. Par. 1853. p. 401. tab. 21.

VIII. PYROLIRION *Herb.*

(Knth. en. V. 489.)

1. PYROLIRION AURANTIACUM Lem. — Lem. jard. fl. IV. tab. 377. misc. p. 27. — F. conjunctifloralib. linearib. carnosulis supra canaliculatis infra convexiusculis scapo longioribus subglaucescentibus; scapo tereti unifloro carneso fistuloso rore micante obducto. fl. maximo sessili vioidissime aurantiaco; spatha ovarium tubumque corollae tubulosa involvente primo carnosula dein siccante membranacea, laciniis marcescentibus longe subulatis applicatis; segmentis corollae b. in tubum brevem connatis. dein sensim convoluto-infundibuli-campanulatim expansis, interioribus angustioribus et oblongioribus, omnibus striato-venatis, margine membranaceo-undulato elevato; filamentis aequalib. fauce omnino esquamata arctissime constricta insertis inclusis dorso convexis ventre angulatis versus basin subalatis robustis; stylo recto vix superante, stigmatib. lin. sp. cuculiato-fimbriatis, ovario subtrigono, ovulis numerosis biseriatis imbricatis. — Patria: Lima.

X. PHAEDRANASSA *Herb.*

(Knth. en. V. 500.)

1. PHAEDRANASSA OBTUSA Herb. — Ind. Petrop. 1855.

Planta nostra differt ab Herberti diagnosi sicut descriptione Kunthii: scapo nec spirali, umbella 8-flora, corollae tubo basi attenuato obtuso, staminibus initio stylo brevioribus, deinde stylo longioribus.

Planta pulcherrima, scapo tripedali glauco. Corolla ad $2^1/_2$ pollices longa, tubo pulchre carmineo; limbo atroviridi erecto patente; laciniis exterioribus apiculatis. Stylus initio corollae longitudine, deinde 3 pollices longus. — Floret Novembri — Decembri. An varietas v. planta hybrida inter Phaedranassam chloraceam et obtusam?

XV. PHYCELLA *Lindl.*

(Knth. en. V. 510. — Walp. Ann. III. 616.)

1. PHYCELLA HERBERTIANA. — Gay fl. Chilena VI. p. 77.

F. angustis obtusis; limbo gracili, paulo attenuato, pallide rubro, filamentis aequali, stylo breviore; membrana fauciali annulari, fimbriata.

Ph. Herbertiana Lindl. bot. reg. tab. 1341. — Herb., Roem., etc.

In campis intra Valparaiso et Santiago.

XVI. HIPPEASTRUM *Herb.*

(Knth. en. V. 514. — Walp. Ann. III. 616.)

1. HIPPEASTRUM DECORATUM Lem. — Lem. jard. fl. tab. 338.

F. (10) postfloralib. b. arctissime vaginantibus mox liberis bifariis viridibus subtus pallidis longissimis linearib. canaliculatis, sc. dorso valde rotundato-carinatis acuminato-obtusis striatulis ultra bipedalib. (ex vivo). Scapo rotundato striatulo ... floribus (ex vivo non observatis) viridulis, coccineo submarginatis et venatis, apicib. coccineis ... filamentis albis et stylo ... (ex figura!)

H. decoratum Lem. sub praes. tab., *H. psittacino* proximum, an ej. varietas?

Patria: Brasilia prov. St. Paul et Minas.

IMANTHOPHYLLUM (non *Imatophyllum* Hook. tab. 2856.) *Hook.*

Hook. bot. mag. 1854. tab. 4783.

Perianth. superum corollaceum, 6-partitum, patenti-campanulatum, tubo brevissimo, lacin. late obovato-lanc. subaequalib., 3 int. paulo majoribus. Stam. 6. Filam. crassa, subulata, patentia, summo tubo

inserta, perianthii laciniis subbreviora. Anth. versatiles, brevi-oblongae. Ovar. inferum trigon., 3-loc., loc. oligospermis, ovula subsex in quolibet loculo biseriatis, angulo interno affixa. Styl. crassus, decurvato-adscendens, perianthio longior. Stigma 3 fidum. Caps. carnosa, indehiscens. Semina (abortione) in singulo loco solitaria, bulbiformia, rugosa subpulposa, magnitudine seminis Fabae vulgaris.

Herba acaulis. Radix e fibris numerosis fasciculatis crassis carnosis. F. radic. ampla lorata disticha, b. latissima amplexante. Scap. plano-convexus, latus, ap. umbellato-multifl. Spatha polyphylla, marcescens, colorata. Fl. ampli, miniati 1-colores, pedicellati, bracteolati; bracteol. linearib.. longitud. fere pedicellorum.

1. IMANTHOPHYLLUM MINIATUM Hook. — Fl. d. serres IX. tab. 949—950. (tab. ex Hook. bot. mag. tab. 4783 iterata.) — Vallota? miniata, Lindl. in gardn. Chron. 1854. p. 119. et p. 149.

GASTRONEMA *Herb.*

(Cyrthanth sectio Knth. en. V. 540. XVIII.)

1. GASTRONEMA CLAVATUM Herb. (Knth. en. V. 540.) — Fl. des serres VIII. tab. 813.

Tribus III. *AMARYLLEAE* Knth. en. V. 542.

XX. GRIFFINIA *Gawl.*

(Knth. en. V. 542.)

1. GRIFFINIA LIBONIANA hort. — Lem. jard. fl. III. tab. 290. — Perigonii a b. sursum curvati bilabiati laciniis aequalib. 3 superis ascendenti-recurvis latiorib. anguste lanc. b. longe attenuatis conniventib. ap. acuto subapiculato, mediana sicut et lateralib. (inferiorib.) ap. in acumen subalatum intus processu quodam coniformi dejecto papillosulo munito attenuata; lateralib. (inferiorib.) angustiorib. horizontalib. ellipticis ap. (descripto) recurvis b. oblique adscendentib. infima dejecto-porrecta recta omnium angustiore; omnib. ad extremam basin in tubum fere ullum carnosulum connatis; staminib. abortu sexti constante 5, filam. robustis perigonio multo breviorib. ascendentibus, infero multo breviore; stylo graciliore aequilongo, stigmate punctiformi. Ovario trigono-piriformi, ovulis 3 e b. ascendentibus oblongo-capitatis, antico minore serius in fructu abortiente? F. brevissimis distichis epetiolatis ovatis acuto-obtusis crassiusculis nervoso-costatis, subt. fenestrato-reticulatis albido-eleganter marmoratis. Scapo ancipite — 8 floro (aut amplius?) spatha diphylla, phyllis longe acuminatis. — Minas Geraes, detexit Libon (1843.)

XXV. HAEMANTHUS *Linn.*

(Knth. en. V. 586.)

1. HAEMANTHUS INSIGNIS Hook. — Hook. bot. mag. 1853. tab. 4745.

Elata subcaulescens, f. plurib. oblongis submembranac. inferne longe cylindraceo-vaginatis, vaginis inferne punctato-maculatis, scapo caulis foliiferi prope b. orto inferne tereti maculato superne compresso-angulato, involucri polyphylli bract. amplis foliac. exteriorib umbella longiorib., fl. numerosissimis, perianthii laciniis erectis.

Patria: Natal. — valde affinis H. puniceo, sed species magnitudine et involucro suo amplissimo valde distincta.

XXVI. AMARYLLIS *Herb.*

(Knth. en. V. 600. — Walp. Ann. III. 617.)

1. AMARYLLIS LEONENSIS. — Hort. Van Houtt. fasc. I. 1845 p. 5. — (§ Habranthus.) Bulbo ovato-elongato, tunicis externis nigricantibus, f. 2—3 linearibus subtus

subcarinatis; scapo longe pruinoso bifloro (aut amplius?) fistuloso; fl. viride miniato-carneis, intus ad faucem setulis obsitam stella maxima ad ap. late fimbriata altius virescente donatis; tubo arctissimo elongato striato deflexo infundibulari rubente: limbi maximi patentissimi deflexo-adscendentis segmentis externis latioribus recurvatis dorso carinatis, ap. carnoso-mucronatis ibique intus dentem quandam glandulam mentientem asportantibus, omnibus aequalibus striatule venosis, inferis subrectis, superis maxime recurvatis; filamentis ad faucem tubi insertis didynamis decurvato-adscendentibus roseis (basi virescentibus); antheris oblongis medio fixis; stylo robustiore longiore directione eadem ac staminum; stigmate vix inflato trigono; ovarii triquetri ovulis horizontalibus biseriatis. — Hab. Sierram-Leonensem, ex qua anno 1845 importata fuit.

Icones addendae.

AMARYLLIS BLANDA Gawl. — (Knth. Synops. V. pag. 601 n. 2.) — Paxton fl. gard. II. pl. 68. p. 155. — Ker in bot. magaz. vol. XXXV. t. 1450. — Lem. jard. fl. tab. 254.

AMARYLLIS ACRAMANII PULCHERRIMA, hybrida ex *A. aulica* et *A. Johnsoni* — Magaz. of bot. I. p. 5. tab. 1.

AMARYLLIS BELLADONNA Linn. (Knth. en. V. p. 601.) — Fl. des serres IX. tab. 911.

AMARYLLIS (var. hybr.) GRAF V. THUN. — Regel Gartenfl. III. p. 275 tab. 97 b.

AMARYLLIS (var. hybr.) SCHRAMMII. — Regel Gartenfl. l. c. tab. 97 a.

XXXVIII. COLLANIA *Schulte.*

(Knth. en. V. 644. — Walp. Ann. I. 885.)

Icon addenda.

1. COLLANIA ANDINAMARCANA Herb. Amaryll. — Hook. bot. mag. tab. 4247.

XLII ELISENA *Herb.*

(Knth. en. V. 656.)

Icon addenda.

ELISENA LONGIPETALA Herb. — Paxt. fl. gard. III. p. 89. xylogr. 275.

XLIII. PANCRATIUM *Parl.*

(Knth. en. V. 664 ex p. — Walp. Ann. III. 618.)

Parlatore nuovi generi e specie di piante monocotyl. 1854. p. 32. — Pancratii species Linn. sp. pl. p. 418 et auctor.

1. PANCRATIUM TORTIFOLIUM Boiss. — Boissier diagn. XIII. p. 18.

P. bulbo obovato, caule brevi subterraneo vaginis tenuiter membranaceis foliorum tecto, foliis synanthiis glaucis linearibus superne attenuatis canaliculato-plicatis circinnatim contortis, spatha laterali breviter pedunculata vel intra folia subsessili tenera albo-membranacea ovata acuminato-bifida 2—3 flora, perigonii albi tubo angustissimo gracili limbo quadruplo longiori apice sensim ampliato, limbi laciniis angustissime linearibus acutis, coronae ultra medium liberae dentibus acute triangularibus, filamentis coronae inter ejus dentes adnatis eis subaequilongis perigonio brevioribus, stigmate perigonium subaequanti.

Hab. in deserto Arabiae prope Djedda Schimper Un. itin. n. 676. — Folia numerosa 1—3 lineas lata plicata valde circinnata, spatha 1½—2 pollicaris, perigonii tubus 4—5 pollicaris, limbus magnitudinis illius P. maritimi. Laciniae jam a basi vix 2 lineas latae. A P. maritimo foliis angustis contortis, tubo longissimo et angustie laciniarum perigonii valde distinctum. P. maximum *Forsk.* ex Arabia quoque oriundum ex descriptione longe differt corona longissima cum tubo pedali etc.

Icon addenda.

PANCRATIUM VERECUNDUM Soland. — Wight Ic. tab. 2023.

HALMYRA Parl.

Parlatore, nuovi generi e specie di piante monocotyled., 1854. p. 28. — Almyra Salisb. in transact. of the hortic. soc. I. p. 336, ubi nomen tantum. — Pancratii species Linn. sp. pl. 148 et auctor.

Perigonium corollinum, subhypocrateriforme, tubo breviusculo subtriquetro recto, limbo 6-partito, laciniis subaeq., patentibus. Corona faucis brevis, patens, libera 6-fida, laciniis profunde bifidis, partitionibus acuminatis. Stam. 6 aequalia, inter coronae lacinias inserta. Filam. crassiuscule subulata, b. corona adnata, reliqua parte libera adscendentia. Antherae lin., longae, utrinque emarginatae, medio dorsi affixae, incumbentes, sec. longitud. dehiscentes. Pollen oblongo-ellipticum, utrinque acutum, laeve. Ovarium inferum, pedicellatum oblongum subtriquetrum, ap. foris tribus nectarifluis instructum, triloculare. Ovula plurima ovata, in loculorum angulo centrali biseriata, divergentia, media horizontalia, superiora adscendentia, inferiora omnino pendula, anatropa, rhaphe crassiuscula. Stylus filiformis trigonus longus rectiusculus, intus cavus! Stigma obtusum capitatum, vix papillosum. Capsula membranacea, oblonga acutiuscula, b. subcordata, triquetra, trilocularis, loculicido-trivalvis. Sem. pauca globosa, testa crustacea fusca, hilo basilari minuto, rhaphe crassa, cylindrica, alba, a b. ad verticem excurrente. Embryo albumine carnoso vix brevior, rectiusculus, subexcentricus, radiculari hilum attingente.

1. HALMYRA STELLARIS Parl. l. c.

Halmyra stellaris Salisb. l. c. — *Pancratium Illyricum* Linn. (Kunth enum V. 660).

Hab. in collib. maritimis Corsicae et Sardiniae; in Hispania, Gallia merid. caet. (non in Illyria).

XLIV. HYMENOCALLIS Salisb.

(Knth. en. V. 664. — Walp. Ann. III. 618.)

Parlatore nuovi generi e specie di piante monocotyled. 1854. p. 33. — Pancratii spec. pl. auct.

XLVI. ISMENE Salisb.

(Knth. en. V. 681.)

1. ISMENE AMANCAES Lindl. (Walp. Ann. III. 619 n. 6). — Lemaire Ill. hortic. I. tab. 28. — Cfr. l. c. pl. descr. ex vivo.

Ismene Amancaes Lindl. bot. reg. t. 1665 etc. — *Pancratium Amancaes* Gowler bot. reg. t. 1224 etc. — *Narcissus Amancaes* R. et P. fl. Peruv. Ill. 53. t. 281 etc. — *Ismene crinifolia* Salisb.

LIX. NARCISSUS Herb.

(Knth. en. V. 731. — Walp. Ann. III. 619.)

1. NARCISSUS (*Chloraster*) SPIRALIS F. et M. — Fisch. et Meyer. Ann. sc. nat. ser. IV. t. 1 p. 30.

F. serotinis, scapo 1—2 fl., corona brevissima sexpartita.

Porto Cavaliere (Cilicia trachaea), in littore maris, loc. lapid.

2. NARCISSUS TAZETTO-POETICUS Gren. et Godr. — Gren. et Godr. fl. d. Fr. III. 257.

N. biflorus β. DC. fl. fr. 5 p. 321.

Fl. parvi (vix 3 centim. diam.), fragrantes, 2—5 in umbellam dispositi; tub. elong. angustus; perigonii divisiones albae v. albidae, ovali-oblongae, patentes v. paulo

reflexae; corona brevis (3—5 millim.) aurantiaco-lutea, marg. crenato-undulato, concolori. F. late lin., b. paulo canaliculata, caeterum, plana, obtusa, carinata, glaucescentia, caulem ancipitem longitud. aequantia. — Flores formam N. poetici, magnitud. paulo ampliorem N. Tazettae referunt. Spatha magna luride alba. Stylus faucem corollae non superans. — Hab. Lattes pr. Montpellier; Grasse. ♃. Maj.

Icones addendae.

NARCISSI VARIETATES HYBRIDAE: Gardn. mag. of bot. III. (1851) p. 169. tab. l. c. 1. *N. poculiformis elegans*. — 2. *N. Leedii*. — 3. *Narc. major superbus*. p. 289. tab. l. c. N. *aureocinctus*. — *N. incomparabilis expansus*. — *N. bicolor maximus*.

Subordo II. *ALSTROEMERIEAE* Knth.

(Knth. V. 758. — Walp. Ann. III. 619.)

(*Amaryllidear*. sect. II. Knth. en. V. 758.)

Morren: Biographie des Alstromères in Ann. d. l. Soc. R. d'agriculture de Gand IV. (1848) 419—496.

LXI. ALSTROEMERIA *Linn.*, *Mirb.*

(Knth. V. 758. — Walp. Ann. III. 619.)

Mart. in fl. Brasil. XV. p. 171.

(f. non resupinata.)

1. ALSTROEMERIA SELLOWIANA Seub. — Fl. Brasil. l. c. p. 173.

Caule glabro, sterili flexuoso, florifero stricte erecto; f. linearib., coriac., mucronulatis, in caule sterili elongatis marg. revolutis, in florifero brevib.; umbella biradiata, 4-flora; perigonio subinfundibuliformi; perigonii foliolis (ut videtur e specimine manco) exterioriorib. lin-spathulatis, interiorib. anguste lanceolatis.

Alstr. Sellowiana Seub. mss. in herb. R. Berol.

Caulis hypogaeus teres, horizontalis, caules epigaeos emittens, caet. — Hab. in Brasilia austr. Sello n. 148, v. sp. s. herb. Reg. Berol. ♃.

2. ALSTROEMERIA LONGISTYLA Schenk. — Fl. Brasil. l. c. p. 173.

Caule tereti sulcato; f. linearib., acuminatis mucronatis, mucrone acuto, marginatis; umbella 5-radiata; radiis bi-trifloris; perigonii foliolis exteriorib. lanc. purpureo-maculatis; stylo perigonium staminaque superante.

Caulis glaber, caet. — Hab. in prov. Minas Geraes pr. Barbacenam Pohl n. 213, v. sp. in herb. Vindob.

(f. resupinata.)

3. ALSTROEMERIA STENOPETALA Schenk. — Mart. fl. Brasil. XV. p. 174.

Caule glabro, stricto tereti; f. subcoriaceis, glabris oblongo-lanc., apiculatis, sessilib., summis lin., tortis; invol. polyphyllo; umbella multiflora; perigonii foliolis oblongo linearib., exteriorib apiculatis, interiorib. acuminatis; staminib. perigonio breviorib.

Caulis teres, glaber, crassitie pennae cygneae, caet. — Hab. in Bras. Serra de Man. Gomez. Pohl n. 1639. — Herb. Vindob. et Monac.

4. ALSTROEMERIA FOLIOSA Mart. — Mart. fl. Brasil. l. c. p. 175. tab. XXI. f. 1.

β. *angustifolia* Mart. f. linearib., remotioribus, umbella 1—6 flora.

γ. *humilior* Mart. f. lin-lanceolatis in medio caule confertis; umbella 2—4 flora.

Alstr. foliosa Mart. (Knth. en. V. 765.)

5. ALSTROEMERIA MONTICOLA Mart. (Knth. enum. V. 761). — Mart. fl. Brasil. fasc. XV. p. 175. tab. XXII. fig. 1.

6. ALSTROEMERIA LONGISTAMINEA Mart. (Knth. en. V. 754.). — Mart. l. c. p. 176. tab. XX. II.

7. ALSTROEMERIA PLANTAGINEA Mart. (Knth. en. V. 761.). — Mart. l. c. p. 178. tab. XXI. II. — Fl. d. serr. VII. tab. 746. — Paxt. fl. gard. III. p. 161. xyl. 309.

8. ALSTROEMERIA FILIPENDULA Seub. — Mart. fl. Brasil. XV. p. 180.

Fibris radicalib. ap. incrassatis longe pedunculatis; caule glabro; f. linearib. acutis glaucis; involucro 4—5 phyllo; umbella simplici, bi—3-flora; perigonii foliolis exteriorib. spathulatis, acutis, interiorib. lanceolatis, acuminatis, infimo deflexo, reliquis triplo breviore.

Alstr. filipendula Seub. mss. in herb. Mart.

Caulis epigaeus teres, crassitie pennae corvinae, caet. — Hab. in prov. Sebastian in silva inter Aldea dos Indos et S. Joao: Luschnath. Fl. Jul. ♃. v. sp. s. in herb. Mart.

Icones addendae.

ALSTROEMERIA TRIFLORA Griff. — Griffith not. (1851) p. 240. tab. 273. — Planta subpedalis elegans glabra, bulbosa. — Caulis teres, f. paucis.

ALSTROEMERIA RUBRA. — Ch. Morel rev. hort. Par. 1853 p. 81. tab. 5.

ALSTROEMERIA ODORATA var. VIOLACEA. — Morel rev. hort. Par. 1858 p. 201. tab. 11.

LXIV. BOMAREA *Mirb.*

(Knth. en. V. 787. — Walp. Ann. III. 620.)

1. BOMAREA SALSILLOIDES Roem. — Mart. fl. Bras. XV. p. 167.

B. edulis var. *grandis* Knth. en. V. 791.

β. *sepium*: f. angustiorib., longius acuminatis, subt. minus glaucis, umbellae radiis pedicellisque pilis sparsis brevissimis obsitis.

Alstr. sepium Schott in herb. Caes. Vindob.

γ. *pauciflora*: umbellae radiis simplicib. paucis unifloris, f. involucralib. umbellam aequantibus.

δ. *pubescens*: f. subtus pilis minutissimis obsitis.

Caulis scandens et varie flexus, saepe tortus, tenax superne nudus, caet. — Hab. in Brasilia, var. β. ad ripas fl. Paraiba, var. γ. in sepib. prov. Paraensis, var. δ. in Bras. merid.

2. BOMAREA BRAUNIANA Schenk. — Fl. Brasil. XV. p. 168.

Caule glabro angulato; f. glabris lanc. ap. in acumen longum productis, b. in petiolum brevit. attenuatis, subt. glaucescentibus; umbellae radiis elongatis, bi-trifloris; pedicellis pubescentib.; perigonii foliolis aequilongis, exteriorib. obovato-oblongis, interiorib. cuneatis; filam. glabris; stylo stamina aequanti, ovario oblongo-turbinato.

Caulis glaber angulatus scandens, caet. — In prov. Minarum: Ackermann, v. sp. sicc. in herb. Al. Braun. ♃.

3. BOMAREA HIRTA Schenk. — Fl. Brasil. XV. p. 169.

Caule pubescente; f. ovato-lanc., brevit. acuminatis, supra pilis brevissimis sparse, subt. dense pubescentib., bi-trifloris; perigonii foliolis subaequilongis, exteriorib. oblongis, interiorib. spathulatis; staminib. perigonio breviorib.; filamentis inferne pubescentib.; stylo staminib. tertia parte breviore; ovario turbinato.

Caulis angulosus, scandens, tortus, pube brevi dense obtectus, caet. — Hab. in Brasil. prov. Goyas pr. Villam Boam; v. spec. s. in herb. Zucc. nunc Monac. ♃.

4. BOMAREA SPECTABILIS Schenk. — Fl. Bras. XV. p. 169.

Caule glabro; f. lanc., acuminatis supra glabris subt. dense pube-

scentib.; umbellae radiis pedicellisq. sparse pubescentib.; perigonii foliolis aequilongis; staminib. pubescentib., perigonio paulo superatis; stylo staminib. breviore; ovario turbinato pubescente.

β. umbellae radiis minus elongatis, f. involucralia ovato-lanceolata fere aequantibus.

γ. *parvifolia*: f. minorib. angustiorib., 2½—3 poll. longis 4—5 lin. l.
Alstr. macrocarpa Pohl mss. in herb. Vindob., vix Rz. et Pav. — *Alstr. salsilla* Vell. Fl. Fl. 131. Ill. tab. 120? quae *Bomarea Janeirensis* Röm. Amar. 287.

Caulis angulatus scandens tortus, caet. — Hab. in opacis ad rivulos silvar. tam maritim. mediterranearum. Pr. Corumba: Pohl. v. sp. s. in herb. Vindob. ♃.

5. BOMAREA MARTIANA Schenk. — Fl. Brasil. XV. p. 170.

Caule angulato, f. lanc. longe acuminatis, supra glabris, subt. canopubesc.; umbellae radiis inferne pilis paucis obsitis; perigonii foliolis aequilongis, exteriorib. oblongis, interiorib. cuneato-spathulatis; staminib. perigonio brevioribus; filam. glabris; stylo staminib. duplo breviore.
Caulis scandens glaber glaucescens caet. — Hab. in Brasilia merid. Sello n. 143, 144. v. sp. in herb. Berol.

Icones addendae.

BOMAREA ACUTIFOLIA Herb. — *Alstroemeria acutifolia* Lk. et Otto. (Kunth enum. V. p. 794.) Paxton fl. gard. III. p. 147. xyl. 304.

BOMAREA HIRTELLA Herbert var. β. Rüschii. — Regel Gartenfl. III. p. 108. tab. 83 (sub nomine var. Rüschiana.)

Subordo III. *AGAVEAE* Salisb.

(Knth. en. V. 818. — Walp. Ann. III. 620.)

LXVII. AGAVE *Linn.*

(Knth. l. c. 818. — Walp. l. c. 620.)

v. Martius Beitr. z. Natur-Gesch. d. Agav. 1855 p. 1—52.

Icones addendae.

AGAVE AMERICANA. — A. Berg Med. Pfl. tab. 130.
AGAVE STRIATA. — A. Berg Med. Pfl. tab. 130.
AGAVE JACQUINIANA Schultes (Kunth en. V. p. 827.). — Hook. bot. mag. tab. 5097 *A. lurida* Jacq. Coll. IV. p. 94. t. 1. (excl. syn.)
AGAVE VIVIPARA Linn. — Wight Ic. tab. 2024.

LXVIII. FURCRAEA (*Fourcroya*) *Vent.*

(Knth. en. V. 839. — Walp. Ann. I. 891.)

Icon addenda.

FOURCROYA GIGANTEA Vent. — Wight Ic. tab. 2025.

LXIX. BESCHORNERIA *Knth.*

(Knth. en. V. 844)

Icon addenda.

BESCHORNERIA TUBIFLORA Knth. (Knth. en. pl. V. 844.) — (*Fourcroya tubiflora* Knth. et Bouch. ind. semin. h. Berol. 1845.) — Hooker in bot. mag. tab. 4642. — Lem. jard. fl. tab. 343.

LXXI. **BRAVOA** *La Llave et Lex.*
(Knth. en. V. 848. — Walp. Ann. III. 620.)

Icon addenda.

BRAVOA GEMINIFLORA La Llave (Kunth enum. V. p. 849). — Hook. bot. mag. 1853 tab. 4741.

Ordo XX. BROMELIACEAE *Lindl.*

(Walp. Ann. III. 621.)

J. G. Beer in Hamb. G. u. Bl. Ztg. X. (1854) p. 313. Versuch einer Eintheilg. d. Familie nach deren Blüthenstand. — Regensb. Fl. 1854. p. 346 et seq.

MADVIGIA *Liebm.*

Liebm. in horto acad. Haun. — Ann. sc. natur. IV. tom. II. p. 373.

Perigonii superi sexpartiti laciniaé exteriores 3 calycinae erectae-carinatae, ovatae, acutae, tubo trigono duplo breviores, extus parce furfuraceae, hyalinae, interiores petaloideae usque ad basin liberae et annulo epigyno insertae nudae albae, exterioribus duplo longiores elongato-lanceolatae, deorsum longe attenuatae, aestivatione convolutiva patulae. St. 6, 3 cum petalis connata et longe decurrentia, 3 libera annulo epigyno inserta. Filamenta petalis parum breviora teretia, superne incrassata glabra alba. Anth. dorso affixae introrsae lineares b. bifidae erectae, demum subhorizontaliter arcuatae biloculares, longitudinaliter dehiscentes; pollen albidum. Ovar. inferum triloculare. Ovula plurima in placenta e loculorum angulo centrali prominula, horizontalia, anatropa. — Stylus longitudinem staminum aequans, exsertus, teres, superne incrassatus. Stigmata 3 subpetaloide recurvata. canaliculata margine papilloso-fimbriata, alba.

Genus a Bromelia differt: staminibus 3 liberis, 3 c. petalis connatis, filamentis superne incrassatis, stylo longo tereti clavato, stigmatib. subpetaloideis, canaliculatis recurvis. (Genus in honorem viri celeberrimi F. N. Madwig prof. philol. dicatum.)

1. MADVIGIA DENSIFLORA Liebm. l. c. — Subacaulis stolonifera. F. dense rosulata vaginantia coriacea patulo-reflexa, lato-linearia, longe acuminata, acutissima, enervia, subcanaliculata, margine undulata aculeato-denticulata, dentib. parvis falcatis subhyalinis, supra glabra nitida, subtus albo-furfuracea. Flores dense fasciculati in axillis foliorum superiorum sessiles, inflorescentia prolifera. Flos spatha hyalina arcte appressa vaginante lanceolata acutata suffultus, albus. — Sub nomine Bromeliae humilis olim ab horto Utrechtiano accepimus.

ANOPLOPHYTUM *Beer*

Bromel. p. 16. 167 et 205.

Calyx inferus; petala erecta, calycem duplo superantia et longiora, tubum clavatum (postremo solutum?) referentia; stamina hypogyna; germen superum, pyramidale, in stylum trigono-filiformem attenuatum; stigmata brevissima, erecta; ovula pluriserialia, apice rotundata, basi calva, teretia; capsula (sine dubio) loculicida.

Cl. Beer hocce genus secundum habitum constituit, foliorum inermium causa nomen Anoplophyti i. e. plantae inermis ei tribuens. Proxime accedit ad Encholirion, quod, ut Puya a Pitcairnia, seminibus, nec non caulibus compressis discrepat. Tillandsiae genuinae speciebus sepala spiraliter convoluta, 2 altius connata sunt, dum Caraguatae species filamentis cum petalis ad maximam partem connatis distinguuntur.

1. **ANOPLOPHYTUM STRAMINEUM** C. Koch in ind. sem. h. Berol. 56.

Folia densissima, creberrima, arcuato-recurvata, glaberrima; scapina sensim minora, patula, denique bracteiformia, adpressa; florum fasciculi sub 5 flori, pedunculo crasso insidentes, distantes; petala erecta, ad basin nuda, straminea, paululo stamina et stylum superantia.

Sine dubio eadem planta ac cl. Beerii A. vittatum (Tillandsia vittata Hort.), sed foliorum vittae in nostro specimine omnino deficiunt, quare nomen mutavi. — Patria regiones tropicae Americae australis, unde cl. Linden eam accepit et in hortos Germaniae distribuit. — Planta nunc in horto Leon. Reichenheim florens foliis creberrimis et dense dispositis conum obversum praebet et fortasse postremo caulescit. Tota planta glaberrima et inermis. Folia late linearia, plane canaliculata, ad superiorem partem lanceolata, sesquipedalia, ad basin pollicem lata, supra virescentia, subtus interdum rubescentia, saepe punctis albis vix conspicuis lineata. Scapus inferne foliis minoribus, patentibus et patulis, ad medium et superne bracteiformibus, lanceolatis, in cuspidem longam attenuatis, adpressis vestitus cum inflorescentia fasciculato-spicata bipedalis et longior, glaberrimus; bracteae virescentes, patentes, lanceolatae, inferiores fasciculos florum superantes, superiores multo breviores, ad basin latiores; flores congesti, sessiles, bracteola oblonga vix semipollicari fulcrati, summus simulque posticus primus florens. Calyx obtuse trigonus, trisulcus, sepalis concavis, oblongis, in sulcis margine sibi incumbentibus; petala erecta, cuneato-oblonga, in stipitem a calyce inclusum, latum attenuata; filamenta late linearia; antherae supra basin affixae, ab initio erectae, postremo volubiles, ad basin sagittatae; loculi superne inanes.

PORTEA *Hort. Belg.*

Koch in ind. sem. h. bot. Berol. 1856.

Calyx superus, sepalis ultra medium connatis, urceolum referentibus apice aristatis; petala erecta, tubum formantia, longe exserta, ad basin (semper?) squamigera, cum staminibus annulo calycis urceolum infra medium cingenti inserta; stamina 3 opposita ad majorem partem cum petalis connata, 3 alterna libera; stigmata 3 in capitulum oligocyclum spiraliter contorta; placentae ovulis pluriserialibus, loculos omnino fere replentia; germen elongatum, saepe medio ventricosum.

Genus proximum Billbergiae et Hoplophyto, habitu et bracteis magnis coloratis convenions, sed sepalis supra medium connatis et germine elongato bene distinctum.

1. **PORTEA KERMESINA** Hort. Belg.

Turiones adscendentes, squamis aridis obsiti; folia viridia, crebra, basi late amplectentia, ad marginem brunneo-virescentem serris sursum directis brevibus munita, apice cucullato, viridi-brunneo; scapina bracteiformia, erecta, scapum brevem totum tegentia; panicula thyrsoidea, ovato-oblonga; bracteae magnae, oblongae, apice rotundatae, sed cuspide brevi instructae, ramos geniculatos furfuraceos simplices cum floribus subsessilibus omnino involventes; petala ad basin squamis binis instructa.

Scapus erectus, cum thyrso 6—8 polliceri, lineari-oblongo pedalis et longior, albo-furfuraceus. Folia bracteiformia glaberrima, viridi-aut dilute-brunnea, vaginarum clausarum modo adpressa, sed apice subbrunneo, patentissimo aut recurvo, vix

semipollicari instructa. Bracteae concavae, nervoso-striatae, inferiores viridi-; superiores intense carneae, fere 2 poll. longae, 1½ poll. latae; bracteolae pollicares et longiores, carinatae, concavae, carneae, uno latere supra medium marginem angulum obtusum exhibente. Germen columnare, medio paululum ventricosum, dilute furfuraceum, 8—10 lin. longum, 2½ lin. latum. Ovula quadriserialia, anatropa, apice appendice lanceolato-filiformi curvatulo praedita, placentae bilobae insidentia, locula plane replentia. Sepala ultra medium connata, alba, superne saepe magis minusve carneo-tincta, ex apice obtuso aut emarginato arista 3 lin. longa carnea instructa. Petala angusta, elongata, sepalis fere duplo longiora, annulo infra medium calycis urceolum cingenti cum staminibus paululum brevioribus inserta; antherae oblongo-lineares, infra medium filamento adnatae, postremo volubiles. Stylus filiformis cum stigmatum capitulo ovato, tricyclo petalorum longitudine. — Planta sine dubio tropico-americana in horto Reichenheimiano floruit et postremo caulescere videtur. Habitu maxime convenit cum Billbergia Queneliana Brongn. (fl. d. serr. t. 1028) et formam obconicam exhibet. Quoad inflorescentiam Billbergiae fastuosae Beer (Pitcairniae fastuosae Morr. in Ann. de Gand III, t. 161) quoque similis est.

PLATYSTACHYS *C. Koch.* Ind. sem. h. Berol. 1856.

(Novum genus *Bromeliacearum.*)

Perigonium duplex, exterius (calyx) sepalis pergameneis aequalibus a bractea inclusis convexis, interius (corolla) petalis linearibus in tubum spiraliter subconvolutis, apice tantum patulis; stamina 6 filamentis spiraliter tortis; antherae initio erectae, serius ad basin incumbentes, basi sagittatae; germen superum, pyramidatum, trisulcum, sensim in stylum attenuatum; stigmata 3, linearia, patentia; placentae integrae, multiovulatae; ovula anatropa, oblonga, apice cuspide curvato praedita.

Genus inter Puyam et Tillandsiam ambiguum, ab utraque filamentis spiraliter tortis et ovulis nec compressis, ut in priore, nec muticis, ut in posteriore, discrepat. Spica complanata cum nonnullis speciebus Tillandsiae e. g. T. maculata congruit, quae, aeque ac aliae quaedam, forsitan huc referenda est. Pedicellus crassus, vertice planus etiam aliis Tillandsiae speciebus proprius est.

1. PLATYSTACHYS CYANEA C. Koch et Sello l. c.
Allardtia cyanea Dietr. in Berl. Gartenz. XX, 241.

Spica composita, complanata; flores biseriati, bractea pergamenea paene omnino inclusi; sepala oblonga, acuta, petalis cyaneis duplo breviora; folia ligulato-lanceolata, inermia, basi dilatata.

Folia inferiora rosacea, pedem longa et ultra, 1—1½ poll. lata, basi latiora et concavo-canaliculata, medio saepe recurvata, margine integra, magis minusve undulata, glaberrima, nuda, viridia, caulina sensim minora, superne bracteas referentia; caulis 2—3 ped. altus, nudus, spica composita paniculata terminatus; bracteae rubescentes, supra concavae, calycem et duas partes (e tribus) corollae includentes; flores parvi, 8—10 lin. longi, 2—2½ lin. lati, pedicello brevi crasso insidentes (disco hypogyno turbinato connati A. Dietr.); sepala subconvoluta, petalis cyaneis erectis duplo superata; stamina petalis paululum breviora, antheris initio erectis, serius magis minusve incumbentibus; germen receptaculo plano angustius, pyramidatum, trisulcum, sensim in stylum stamina longitudine aequantem attenuatum; stigmata 3 linearia, patentia; placentae integrae multiovulatae; ovula anatropa, oblonga, apice cuspidata. — Planta ab indefesso peregrinatore de Warszewicz in Guatemala detecta, ab A. Dietrich Allardtiae nomine ut genus proprium proposita est; at Allardtiae nomen jam antea a cl. Decaisne Rubiacearum genere tributum est.

PHYTARRHIZA *Vis.*

Visiani in Memorie dell' J. R. Istituto Veneto di Scienze Littere ed Arti. V. (1855) p. 340.

Perianthium liberum sexpartitum, laciniis exterioribus calycinis arcte spiraliter convoluto-imbricatis, aequalibus, b. coalitis; interioribus petaloideis liberis, unguibus elongatis erectis b. nudis, lamina reflexo-patente. Stam. 6 hypog., filamentis lanc-linearibus paulo supra b. sagittato-emarginatam filamento insertis, erectis, polline ovali. Ovarium liberum trisulcum triloculare, ovulis plurimis lin-oblongis in angulo loculorum centrali secus axim ovarii aggregatis horizontalibus. Stylus pyramidatus trisulcus obtuse trigonus. Stigma profunde trifidum, lobis crassiusculis brevissimis complicatis puberulis. Caps. coriacea triangularis trisulca oblongo-linearis ap. acuminata, loculicide trivalvis, valvis endocarpio mox secedente duplicatis navicularibus, marginibus introflexis septa constituentibus. Sem. plurima lin-clavata stipitata, stipite pilis longis papposis denticulatis cincto, fundo capsulae inserta.

Diff. a Tillandsia L. laciniis perianthii exterioribus aequaliter divisis, nec duabus altius connatis: interiorib. distinctis liberis nec b. in tubulum convolutis connatisve; antheris erectis nec incumbentibus et stylo pyramidato nec filiformi. Magis vero discrepat a Pourretia R. et Pav. praeter antheras erectas et stylum pyramidatum, stigmatib. brevissimis crassis nec linearibus.

1. PHYTARRHIZA DURATII Vis. c. ic. l. c. color.

Syn. *Tillandsia Duratii* Vis. ill. in Nuovi saggi dell' Acad. di Padova vol. V. p. 271. — *Tillandsia ? Duratii* Vis. in orto bot. di Padova descr. ed illustr. p. 146.

Planta omnis argenteo-aut cinereo-lepidota, arrhiza, f. inferioribus lanc-subulatis crassis canaliculatis inermibus, subt. convexis carinatisve, patulis recurvis aut circinatis, caule florifero multo brevioribus, caulinis bracteaeformibus adpressis brevissimis, panicula terminali contracta compressa e spiculis 3—6 floris bracteatis pedunculatis, fl. alternis distichis approximatis 1-bracteatis sessilibus. Fl. pallide violacei Mathiolam incanam redolentibus. Floret in calidario mense Majo. Hab. . . .

MACROCHORDION *de Vriese* gen. n.

Hort. acad. Lugd. Batav. pl. rar. ann. 1854.

Perigonii hexameri laciniae exteriores calycinae subaequales, glabrae, convexae, subcarnosae, ap. coriaceae; interiores petaloideae exteriorib. multo longiores, angustiores, ap. erectae, interne squama latiore multisetosa instructae; stamina 6, 3 cum petalis alterna, epigyna, libera, sursum conniventia, filamentis, filiformib. elongatis antherisq. incumbentib., bilocularibus, basifixis instructa; 3 petalis adnata, e medioq. setarum exorta, iis accumbentia et filamentis destituta, anther. imperfecte bilocularib. erectis. Ovar. 3-loculare, locul. inaequalib., f. carpellarib. b. tumida jam in statu immaturo secedentib. Ovula indefinita, e loculis a longissimo funiculo umbilicali pendula. Styl. brevissimus; stigmata 3 breviss., petaloidea, acuta. Caps. abortu 1-locularis. Semina plurima elliptico-ovoidea, rhaphe fere circulari instructa. Spermodermis exterior cornea, fusca; embryo parvus in albumine magno, farinoso.

Sunt herbae Americanae tropicae, terrestres scapigerae, spadiciflorae; spathis coloratis, roseis, v. fuscis; f. lato-ligulatis, linearib., spinosis.

1. MACROCHORDION TINCTORIUM de Vriese.

F. elongatis, linearib., lato-canaliculatis, ap. revolutis, margine dentatis, dentib. nigris, acute pungentib.; bracteis (spathis) acutis, dentatis; spica

spadiciformi, fl. spiraliter dispositis, rhachi carnosae lanuginosae alte inmersis; petalis saepe vix emargenatib., atris, vix in ap. inflorescentiae flavis. —

Billbergia tinctoria. Mart. in Roem. et Sch. VII. 2. 1256. Schult. fil. in Mart. Fl. Brasil. ined. — Bromelia tinctoria Mart. Reise Bras. II. 554 et in Buchner rep. — Brom. melanantha Bot. reg. tab. 756. — Billberg-tinctoria Mart. Cfr. Morren in ann. d. l. soc. roy. d'agric. et d. bot. d. Gand n. 2. 1847. p. 55.

HOPLOPHYTUM *Beer* Brom. p. 22.

(Knth. Ind. sem. h. Berol. 56.)

Calyx superus, sepalis apice aristatis; petala erecta, tubum sub apice plerumque constrictum referentia, staminibus stylisque longiora; stigmatum capitulum laxe oligocyclum; germen inferum, breve; ovula anatropa, apice rotundata, locula plane replentia; fructus baccatus.

Habitus Billbergiae, quacum species pleraeque antea conjunctae erant. Hoplophytum a Billbergia praesertim differt petalis angustioribus, erectis, nunquam apice patentibus aut recurvatis et ovulis apice exappendiculatis, rotundatis. Inflorescentia saepe paniculata, raro spicata, floribus unicoloribus ornata.

1. HOPLOPHYTUM COELESTE C. Koch l. c.

Billbergia coelestis Hort. Reichenb.

Folia punctis albis passim conspersa, apice triangulari pungente, margine serris parvis brunneis munita, scapina bracteiformia, erecta, adpressa, albo-carnea, lanugine detersibili aeque ac scapus dense vestita; panicula viridi-brunnescens, superne floribus solitariis, sessilibus, patentissimis obsita; sepala apice arista aequilonga et utrinque appendice ovata nitente praedita, aeque ac germen lanugine detersibili vestita; petala basi nuda.

Folia patentia, mox retrorsum arcuata, viridia, majora 1¼—1½ ped. longa, 1¾—2 poll. lata. Scapus erectus, strictus, cum panicula 6—7 poll. longa et ad basin 2—2½ poll. lata pedalis et longior, inferne viridis, superne viridi-brunnescens. Ramuli paniculae horizontales, breves, cum floribus plerumque 4 alternis sessilibus vix 1—1¼ poll. longi, lanuginosi. Germen obtuse et obscure trigonum, pallide virescens, 3 lin. longum, 2½—3 lin. latum, triloculare, ovulis anatropis, subclavatis, tri-, quadriserialibus; sepala basi connata, ovata, germinis longitudine, viridi-brunnea; petala erecta, sepalis, duplo, staminibus et stylo paululo longiora, elongato-clavata basi nuda. Stigmata 3 styli longitudine, inferne distanter, superne approximate spiralia et capitulum formantia.

Species sine dubio ex America tropica in Belgiam allata, nunc in horto Reichenheimiano culta, H. nudicauli C. Koch (Billbergiae nudicauli Lindl. ad tab. 1060 nec tab. 208) affinis, quae inflorescentia simplici et bracteis majoribus differt. H. purpureo-roseum Beer Bromel. p. 135 (Billbergia purpureo-rosea Hook. bot. mag. tab. 3204) multum discrepat inflorescentia magis ramosa, ramis geniculatis et floribus roseo-purpureis.

2. HOPLOPHYTUM NUDICAULE C. Koch l. c.

Bromelia nudicaulis L. cod. Nr. 2268. — *Billbergia nudicaulis* Lindl. in bot. reg. ad tab. 1068. — *Billbergia pyramidata* Beer Bromel. p. 123. — *Hoplophytum lanuginosum* Beer Bromel. p. 138. — *Billbergia lanuginosa* Hort. Hamb. — ? *Tillandsia unispicata* Arrab. fl. flumin. III., t. 124. — ? *Hoplophytum unispicatum* Beer Bromel. p. 138.

Folia elongata, lurido-viridia, apice rotundato sed acutiusculo, ad marginem serris nigris majoribus munita, scapina bracteiformia, elliptica, erecta, superiora intense rosea; scapus lanugine albo detersibili vestitus, spica simplici terminatus; flores solitarii, inferiores soli bractea magna

rubenti fulcrati, germine pubescente, sepalis flavo-viridibus, glabris; petala lurido-lutea, ad basin squamigera.

Haec species inflorescentia simplici et floribus lurido-luteis haud aegre ab affinibus speciebus distinguenda saepe cum aliis commutata est, quamquam a Linnaeo ad Bromeliam nudicaulem suam icon facillime cognoscenda e Plumieri libro (plant. amer. fascic. a Burmannio edit. tab. 62) jam citatur et a cl. Hookero in libro suo „exotic flora" tab. 143 planta denuo optime descripta ipsaque depicta est. Cl. Lindley antea nomine Billbergiae nudicaulis aliam plantam in diario „botanical register tab. 203" in medium protulit, quam postea ipse (in eodem diario ad tab. 1068) a Billbergia pyramidali sua (Bromelia pyramidali Sims.) non diversam esse pronunciavit. In monographia Bromeliacearum nunc a cl. Beerio in lucem edita autor Billbergiam nudicaulem Lindleyi, ut primo nominatam, hoc nomine servat, Plumieri plantam vere ut speciem novam nomine Billbergiae pyramidatae constituit, dum Bromeliam pyramidalem Hookeri cum suo Hoplophyto unispicato (Tillandsia unispicata Flor. Flumin.) conjunxit. Ante aliquot annos denique ab horto botanico Hamburgensi nomine Billbergiae lanuginosae planta pervulgata est, quae a nostro Hoplophyto nudicauli nullo modo differre videtur, et quam cl. Beer nomine Hoplophyti lanuginosi in monographia sua descripsit.

1300. BROMELIA *Linn.*

(Walp. Ann. I. 838.)

1. BROMELIA COMMELINA de Vriese. (char. auct. et emend.) — Hort. Acad. Lugd. Bat. pl. rar. ann. 1854. — F. longissimis; inferiorib. patentissimis, superiorib. erecto-patentib., recurvis, b. dilatata, rosea, canaliculata, striata, supra laete viridib., nitidis, infra pallide glaucescentib., ap. mucronulatis, margine antrorsum et retrorsum remote-uncinato-aculeata, aculeis b. flavescentib., ap. badiis; f. interiorib. reliquis triplo breviorib., b. latiore ventricosa adpressa, lamina reliqua angustata, lanc-acuminata, supra coccinea, inferne incarnata; racemo erecto, stricto, elongato, 2-pedali, composito; rhache ramulis pedicellisq. densa ex albo farinosis, tomentosis, bract. membranac., e flavescenti-albis, pulverulentis, inferiorib. e b. latiore aculeata, ciliata subito et longo aculeatis, mucronatis, reliquis linguaeformib. integris; florib. 1—5 nis, coroll. lilacinis, stigmatib. trifidis, subpetaloideis; caps. oblongo-ovatis, carnosis, obscure trigonis, calycis induviis coronatis, pulchre aurantiis; seminib. pennis, rotundato-depressis, horizontalibus. (Olim a me descripta in Cat. sem. Amst. 1843). Patria: America calidior. — Linnaea XXVI. p. 757. — (Omnino diversa est a B. sceptro Fenzl et Beer.)

2. BROMELIA ROHANIANA de Vriese. — Hort. acad. Lugd. Batav. pl. rar. ann. 1854. — Foliis strictis, rigidis, obscure viridibus, albo-farinoso-latoque vittatis, margine nigro-aculeatis; scapo racemoso, pulchre carneo, bract. oblongo-v. ovato-lanceolatis, subacuminat., pulcherrime roseis, pellucidisque; calycib. roseis, adpressis; corollis in anthesi contortis, coeruleo rubris, petalis in fl. aperto b. pulchre sanguineis, lamina pulchre cyaneis, revolutis. Pistillo elavato, ap. valde tumido, spirali, pulchre coerulescente, stylo viridi. — ♂.
Dico plantam pulcherr. Serenissimo principi Camillo de Rohan, botanices et horti culturae eximio fautori. — (Linnaea XXVI. p. 756.)

3. BROMELIA LONGIFOLIA Rudge. — Paxton fl. gard. II. pl. 65, p. 139.

F. longissimis farinosis spinoso-dentatis recurvis in ap. longum linearem setaceo-acuminatum productis, spica glob. subsess. multiflora, br. oblongis subrotundis serrulatis cuspidatis albo-furfuraceis, sepalis lin. lanc. subspinosis furfuraceis petalis vix duplo brevioribus.

Br. longifolia Rudge Reg. Gartenfl. tab. 223. — *Brom. longifolia*, Rudge, Pl. Guianens. p. 31, t. 49.

Hab. in Guiana.

Icones addendae.

BROMELIA BICOLOR Ruiz. et Pav., Fl. Peruv. et Chil. t. III. p. 33. — Gay Fl. Chilena Atl. bot. Phanerog. tab. 66.

BROMELIA CAROLINAE Beer. — Regel Gartenfl. VI. p. 361. tab. 211.

1300. AECHMEA *Rz.* et *P.*

(Walp. Ann. I. 838.)

1. AECHMEA MUCRONIFLORA Hook. — Hook. bot. mag. tab. 4832.

F. lato-ligulatis obtusis c. apiculo canaliculatis cartilagineis spinuloso-marginatis b. late ventricosis racemo denso spicato brevi elliptico, bract. universalib. amplis foliaceis coloratis (coccineis) denticulatis acutissimis, fl. glomerato-fasciculatis, bracteis partialibus calycibus petalisq. mucrone spiniformi atrofusco terminatis, filam. alternis petalis confluentibus, fructibus coeruleis.

Habit.: Démarara. Aechmeae Mertensii tab. 3186. l. c. affinis.

2. AECHMEA DISTICHANTHA Lem. — Jard. fl. III. tab. 269. — Habitu Bromeliae, acaulis, f. confertis b. oblonge lateq. dilatato-amplexantibus dein late-ligulato-linearibus erecto-patulis rigidissimis subcrassis undique cinereo-virentibus conferte striatulis tomentose densissime minutissimeque squamulosis, ap. siccante aculeiformi, marg. aculeis fuscis nec non robustis subuncinatis suffulto (ex vivo). Scapo longiore parce lanato colorato, sq. parvis vaginanti-distantib. vestito, panicula b. nuda multispicata, bracteis minimis bracteolis conformibus, spicis subdistichis plurifloris, florib. alterne distichis, unoquoque solitario bracteolis 2 rotundato-cucullatis ap. setaceo-mucronatis b. latissima obliqua c. rhachi flexuosa connata, antice versus b. coalitis postice usque ad b. liberis conniventib. costulatis, ovario sessili... ovulis numerosissimis angulo summo loculi affixis... petalis b. nudis... staminib. glabris... (ex sicco).

Billbergia? distichostachya Lem. jard. fl. II. misc. 96. — *B. polystachya* Lindl. Paxt. fl. gard. III. tab. 80.

Disquamia genus novum? — Brasilia?

Icon addenda.

AECHMEA DISCOLOR Morren. — (Ann. de Gand II. 175. tab. 65.) — (Hooker in bot. mag. tab. 4293). — Gardn. mag. of bot. II. p. 121 tab. 11.

1302. BILLBERGIA *Thunb.*

(Walp. Ann. I. 838.)

Koch ind. sem. h. Berol. 56.

Hujus generis species, iis quae ad *Macrochordium* de Vr. et *Hoplophytum* Beer referendae sunt, exclusis, sectiones naturales 3 formant.

I. *Densiflorae* (Jonghea Lem.) Spica erecta, floribus dense obsita; bracteae inferiores magnae, coloratae, reliquae minutae aut nullae; petala ad apicem revoluta. B. pyramidalis Lindl. (nudicaulis Lindl. et Beer, nec Hook., et bicolor Beer). thyrsoidea Mart., Paxtoni Beer (thyrsoidea Paxt. et Lem.), Croyana de Jonghe, fastuosa Beer (Pitcairnia fastuosa Morr.), splendida Lem. et longifolia C. Koch et Bouché.

II. *Cernuae.* Spica cernua, floribus remotis; petala apice longe revoluta aut patentia.

III. *Remotiflorae.* Spica erecta, floribus remotis obsita; petala magis minusve apice revoluta.

I. *Densiflorae.*

1. BILLBERGIA THYRSOIDEA Mart. — Hook. bot. mag. 1853. tab. 4756.

F. erectis lato-ligulatis obtusis c. acumine aequaliter concavis spinoso-serratis scapo paulo longiorib., spathis ovato-lanc. acuminatis, spica thyrsoidea, fl. densis subebracteatis, germinib. calycibusq. albo farinosis, petal. obtusis, calyce multo longiorib.

— Paxton fl. gard. III. p. 3. tab. 74. — Lem. jard. fl. tab. 267. — *B. thyrsoidea*, Mart., in fl. Brasil. ined.; Schultz, syst. veget. VII. p. 1260.

Patria: Brasilia, in locis rupestrib. pr. Rio Janeiro.

var. *zonata* de Vr. Tuinbouw Flora I. p. 353. c. t.

2. BILLBERGIA SPLENDIDA Lem. — Lem. jard. fl. II. tab. 180. 181.

F. late ligulatis b. dilatato-amplexantibus recurvis ap. abrupte oblique breviterq. tortis mucronatis viridissimis tenuissime serratis, scapo vix aequali robustissimo erecto pulverulento, bracteis maximis late lineari-lanceolatis b. quadratis iis sub florib. exacte e b. lanceolatis paulo latioribus, omnib. splendide miniato-roseis ap. subacuminatis, apiculo albido crasso incurvo; fl. numerosissimis densissime congestis, sessilibus omnino ebracteolatis; ovario subhexagono oblongo incurvo pulverulentissimo, calycis aequalis laciniis rectis truncatis, petalis triplo longioribus linearibus canaliculato-rectis ap. mucronulato-revolutis, b. bicristatis, staminib. liberis planis, petalis oppositis b. membrana velatis, stigmatib. spiraliter capitato-convolutis.

B. thyrsoidea hort. non Mart.

An nov. genus, Jonghea Lem.

3. BILLBERGIA LONGIFOLIA C. K. et Bouch. ind. sem. hort. Berol. 1851.

Billbergia rhodocyanea Hort. nonn.

Folia glabriuscula, erecto-patula, viridia, serris parvis distantibus obsita; scapus parce floccosus, foliis bracteiformibus apice patulo excepto adpressis, amplectentibus, albo-roseis praeditus; sepala intense rosea, glabra, sed ad apicem albo-farinosa; petalorum lamina longe revoluta, rubro-violacea; squamae fimbriatae ad basin petalorum.

Sub nomine B. rhodocyaneae in hortum introducta, foliis nudis aut ad partem inferiorem dorso vix farinosis, rarissime transverse fasciatis, elongatis, fere aequilatis ad apicem solum lanceolatis, 3 ped. saepe longis 1¼—1½ poll. latis, erectis, supra medium recurvato-patentibus ab affinibus sectionis Jongheae haud aegre discernenda. B. thyrsoidea Mart. praeterea bracteis et floribus lateritiis, B. pyramidalis Lindl. foliis ad partem inferiorem brunneis differt. — Scapus albus, superne virescens, nudus aut superne sub bracteis subfarinosus. Flores sessiles; sepala ovato-oblonga, carnosula, 5—6 lin. longa, 3 lin. lata; petala parte tertia suprema revoluta, 15—16 lin. longa, 4 lin. lata; ad basin albida, medio sordide rubescentia, ad apicem contra rubro-violacea, ad latus utrumque paginae inferioris a basi ad medium callo, ad basin postremo squama biloba praedita; stamina aequilonga, petalis paululo longiora, exserta, antheris angustis infra medium dorsi insertis; stylus albus, trigonus, lineari-columnaris, stamina vix superans; stigmatum capitulum pentacyclum, ovatum, violaceum; germen columnare, hexagonum, pallide roseum, farinosum; placentae binae, lineares, e medio centro egredientes, basin et apicem loculorum non attingentes; ovula tri- (in quoque loculo sex-) serialia, superposita, anatropa, ad apicem lanceolata appendice instructa, horizontalia aut inferiora pendula.

II. *Cernuae.*

4. BILLBERGIA MORELIANA Ad. Brgn. in Portef. des Hort., revue Hortic. III. 82. — Paxton fl. gard. III. p. 21. pl. 77. — K. Koch ind. sem. h. Berol. 1856.

F. ligulatis canaliculatis obtusis albo-fasciatis vers. b. spinoso-dentatis cauli aequalib., caule glabro squamis magnis petaloideis laxis distanter vestito, racemo multifloro recurvo glabriusculo, bract. coloratis dorso minutissime lepidotis florib. fasciculatis longioribus, sep. oblongis obtusis

mucronatis membranaceo-marginatis ovarioque laevib., petalis revolutis calyce multo longiorib., staminibus longe exsertis.

B. Moreliana (vera) Lem. jard. fl. tab. 271. — *B. zebrinae* var. an potius *Billbergiarum* species distincta. — Patria ignota. — Gardn. mag. of bot. III. (1851) p. 33. tab. 1. c.

5. BILLBERGIA PULCHERRIMA C. K. et Bouch.

? *Billbergia Moreliana* Beer nec Paxt. et Lindl.

Turiones adscendentes; folia patenti-recurvata, supra laete viridia, ad basin et subtus albo-punctata; scapus infra medium cernuus; flores solitarii, patentes, inferiores bracteis magnis amoene rubris longioribus fulcrati, superiores nudi; petalorum basi squamigerorum lamina revoluta, violaceo-coerulea, ad basin flavo-virescens, rubro-violaceo marginata.

Folia rigida, pergamenea, nitida, lingulata, sesquipedalia et longiora, basi pollicem lata, ad marginem serris sursum curvatis, parvis, crebris armata. Scapus parce floccosus aut glabriusculus, cum inflorescentia lanugine alba detersibili vestita 15—18 poll. longus, foliis bracteiformibus erectis, oblongo-lanceolatis, apice virescente vix serrulato et basi semi amplectenti exceptis, glabris, amoene rubris, bipollicaribus et longioribus obsitus. Germen pallide virescens, cum sepalis ovato-oblongis, ad apicem rotundatis paululo longioribus, pollicare, farinoso-floccosum. Petala sepalis duplo triplove longiora, parte inclusa flavescente; squamulae binae lacero-multifidae ad basin petalorum et deinde utrinque callus longitudinalis medium petalum attingens. Stylus triangularis filiformis, cum stigmatum capitulo laxe 2—2½ cyclo paululo staminibus brevior. Loculi germinis ad basin inanes. Placentae bifidae, lobis divergentibus. Ovula quadriserialia, anatropa, horizontalia, stipitata, apice appendice lanceolata brevi praedita. — Nomine B. Morelianae tres species diversae in hortis coluntur, quarum una a cl. Brongniarto in horto botanico Parisiensi denominata, sed nondum descripta est. Primus Billbergiam Morelianam in lucem edidit. cl. Lindley et in Paxtoni diario „flower garden" III. tab. 77 depinxit. Huic plantae nomen Billbergiae Morelianae servandum est. Aliam plantam cl. Lemaire in diario suo „jardin fleuriste" Tom. II. tab. 138 Billbergiae Morelianae nomine descripsit atque depinxit, inflorescentia erecta distinctam, quam postea ipse (Tom. III. tab. 271) erroneam agnovit. Haec a cl. Beer in Bromeliacearum monographia nomine B. amabilis significata est. Tertia denique species a cl. Beer nomine B. Morelianae descripta et horto botanico communicata est, quam a Morello ipso accepit ideoque veram plantam esse putat.

6. BILLBERGIA LEOPOLDI Hort. belg.; K. Koch l. c.

Turiones erecti; folia praesertim dimidio inferiore albo-fasciata, ceterum punctis albis creberrimis obsita; scapus gracilis, pallide viridis, cernuus; bracteae anguste ellipticae, cinnabarinae, subtus minus, supra magis argenteo-lepidotae; panicanula laxa, spiciformis; sepala glaberrima, roseo-cinnabarina, apice cuspidato patente; sepalorum ad basin squamigerorum lamina azurea, denique ad calycem usque revoluta.

Folia erecta, superne recurvata, lingulata, ad apicem subito acuta, 2½ ped. longa, 2 poll. lata, serris ad marginem munita. Scapus foliis bracteiformibus anguste ellipticis, 5 poll. longis, 8—10 lin. latis, nervoso-striatis, cinnabarinis, argenteo-lepidotis obsitus. Panicula cernua, 8—10 poll. longa, 2½—3 poll. in diametro, pedicellis brevissimis, aeque ac rachis, griseo-pruinosis. Pedicelli inferiores floribus 3—4 sessilibus praediti, vix pollicem longi. Bracteolae lato-ovatae, arido-membranaceae, trinerves, 2½—3 lin. longae et latae. Germen sulcato-striatum, bracteola duplo triplove longius, pallide virescens, glaberrimum. Sepala oblonga, glaberrima, roseo-cinnabarina, apice coeruleo, breviter apiculato, patente, longitudine germen fere duplo superantia, petalis autem duplo breviora; quae 1¼—1½ poll. longa, 4 lin. lata, parte inferiore calyce inclusa sulphurea, medio rubra, ceterum azurea. Stylus columnaris, triqueter, cum stigmatum capitulo tricyclo coeruleo stamina paululum superans, longitudine sepalorum. Loculi germinis basi et apice inanes. Ovula quadri-

serialia, funiculo brevi crasso insidentia, horizontalia, anatropa, apice rotundata, nec appendiculata. — *Species pulcherrima*, affinis B. Morelianae Lindl. in Paxt. fl. gard. III. tab. 77 et Lem. in jard. fleur. III. tab. 271 (nec II. tab. 188), quae tamen floribus 3 et 4 fasciculatis sessilibus, nec pedicello communi insidentibus discrepat; B. Wetherellii Hook. (dubia Hort.) inflorescentiam simplicem floribus solitariis et turiones procumbentes, demum adscendentes habet. Patria mihi ignota, sine dubio America tropica.

7. BILLBERGIA WETHERELLI Hook. — Hook. bot. mag. tab. 4835. — Koch l. c.

F. cartilagineis lato-ligulatis obtusis c. acumine b. latioribus concavis circumvolutis marginib. obscure spinuloso-serratis, scapo folior. vaginis inclusis, rhachi tomentosa spicaque densa exsertis nutantibus, bracteis universalib. amplis coloratis coccineis, petalis (ap. purpureis) spathulatis intus versus basin lin. duabus membranac. subfimbriatis et ad bas. squamis duabus fimbriatis.

Species missa e Bahia a Mr. Wetherell.

8. BILLBERGIA GLYMIANA de Vriese. — Hort. acad. Lugd. Batav. pl. rar. ann. 1854.

F. lato-linearib. canaliculatis, acutis apice reflexis, remote nigro-spinosis, scapum fere aequantib.; pedunculo longe et late bracteato; bracteis pulchre roseis; racemo multifloro nutante; fl. sessilib., elongatis; sep. fere cinnabarinis, oblongis, acutis, mucronulatis; petalorum (sepala 2—3 superantium) unguib. viridib., laminis dem. revolutis, cyaneis, tandem violaceis; stigmate spirali.

(Jaarb. d. Kon. Ned. Maatsch. v. Tuinb. 1858. p. 37.) — *Dixi in honorem expertissimi cultoris Ultrajectini C. Glym.* — Patria l. c. non adjecta. — (Linnaea XXVI. p. 756.) — K. Koch in ind. sem. h. Berol. 1856: in horto botanico culta nondum floruit, sed B. Wetherelli proxima et vix diversa mihi videtur.

9. BILLBERGIA VIRIDIFLORA H. Wendl. in Otto et Dietr. Gart. Z. 27. maj. 1854. — Fl. d. serres X. tab. 1019—1020.

F. longis, anguste ligulatis, arcuatim reflexis canaliculatis, longe acuminatis b. et ap. integerrimis medio remotiuscule spinuloso-serratis (in spec. Van Houtt. fere per longitudinem totam serratis), scapo folium subaequante, bracteis floccosis, racemo elongato simplici nutante; fl. solitariis remotis, longe pedunculatis, pedunc. subhorizontalib., laciniis perigonii glabris nitidiusculis, subpruinosis, viridibus. — Wendl.

Patria specialis adhuc ignota. — Floruit in horto Herrenhausen pr. Hanover.

10. BILLBERGIA IRIDIFLORA Nees et Mart. in nov. act. acad. Leop. Carol. nat. cur. XI. 16. — K. Koch l. c.

Folia atro-viridia, interne purpurea, ad marginem undulata; scapina bracteiformia, corallino-rubescentia; scapus infra medium cernuus, glaberrimus; flores distantes, patentissimi, solitarii, omnes bracteis corallino-rubescentibus fulcrati: petalorum lamina coerulea, minus recurvata.

11. BILLBERGIA ZEBRINA Lindl. — K. Koch. l. c.

Folia pauca, canaliculata, subtus, interdum etiam supra, transverse albo-vittata, ceterum viridia, scapina bracteiformia, rosea; scapus lanugine albo-floccoso detersibili dense vestitus, infra medium cernuus; flores subsessiles, distantes, solitarii, calyce et sepalis albo-floccosis; petalorum lamina paululum revoluta; viridi-lutea; squamulae ad basin petalorum binae.

III. Remotiflorae.

12. BILLBERGIA VITTATA Hort. nec Beer (*B. Moreliana* Lem. jard. fleur. II. t. 188., *B. amabilis* Beer Bromel. p. 118., *Tillandsia Moreliana* A. Brongn. in Gard. mag. et bot. III. p. 33 c. ic.) K. Koch l. c.

Folia basi canaliculata, erecta, transverse albo-vittata, ceterum viridia, scapina bracteiformia, magna, sordide rosea; scapus glaber, panicula spiciformi glaberrima terminatus, pedicelli inferiores 2—3, superiores 1-flori; germen rubrum; sepala rosea, ad apicem patulum coerulea; petalorum lamina paululum revoluta, coerulea ad basin rubra.

13. BILLBERGIA LIBONIANA de Jonghe. — Flore d. serres X. tab. 1048. p. 195. — Surculosa, f. pseudo-radicalibus, ligulatis acutis mucronatis marg. serrulatis supra laete viridibus subt. furfuraceo-albidis, scapo plus minus nutante nunc suberecto lanuginoso ap. paucifloro bracteis scariosis linearib. obsito, florib. spicatis dissitis, calycis glaberrimi aurantiaci bractea longioris laciniis lineari-oblongis tubo ovario adnato longioribus, petalis calyce duplo et ultra longioribus late spathulato-linearibus inferne albidis ap. saturate caeruleis b. pilosis intus lamina ap. bifida adnata a b. ultra medium extensa duplicatis.

B. Liboniana de Jonghe Journ. d. hort. prat. mars. 1851, c. icone, Lem. jard. fleur. III. 197.

14. BILLBERGIA PALLESCENS C. K. et Bouch. ind. sem. h. Berol.

Billbergia pallida Hort. nonn. — ? *Billbergia amoena* Beer Fam. cl. Bromel. 122.

Folia utrinque pallide viridia, glaberrima, ad marginem serris parvis brunneis armata; scapus glaberrimus, erectus, pauciflorus; bracteae cerasino-rubrae, supremae minimae; petala virescenti-flava, lamina rubescenti, superne revoluta et coerulea, ad basin squamula lacera utrinque praedita,

Folia inferiora breviora, superiora longiora, pedem longa, $1^1/_4$—$1^1/_2$ poll. lata, usque ad basin fere late canaliculata, in cyathi formam disposita, nitidula coriaceo-pergamenea, lingulata, apice obtuso. Scapus foliis brevior, pennae anserinae crassitie, virescenti-albus, foliis bracteiformibus sub 3, internodia saepe longitudine duplo superantibus, ellipticis, cerasino-rubris, $2^1/_4$ poll. longis, 10 lin. latis obsitus. Flores 3—6, sessiles aut inferiores pedicello brevi insidentes, interdum bini, plerumque solitarii, bipollicares et longiores. Germen pallide virescens, 12-sulcatum, semipollicare, calyce pallide stramineo, apice erecto coeruleo, obtuse trigono paululo brevius. Petala lineari-oblonga, ad partem inferiorem albescentia, ad superiorem virescenti-flavida, apice summo patulo, post anthesin revoluto, coeruleo. Stigmatum capitulum laxe sesquicyclum, cum stylo filamentis longius, sed petala subaequans; loculi germinis basi et apice inanes; ovula anatropa, ad apicem appendice lanceolata recurvata instructa, biserialia. — In horto botanico diu nomine Billbergiae pallidae culta, foliis nitentibus, glaberrimis, nec punctis albis creberrimis longitudinalibus obsitis et bracteis cerasino-rubris, nec roseis multum a B. pallida Lindl. act. reg. t. 344 discrepat, quae ab autore ipso a Tillandsia amoena Lodd. bot. cab. t. 78 non diversa esse dicitur. Billbergia Liboniana de Jonghe germine et calyce intense rubris haud aegre distinguenda est. Porro in hortis Billbergiae species nomine chlorocyaneae occurrit, quae an a planta de Vrieseana hujus nominis differat nescio. A nostra B. amoena Lindl. (pallida Lindl.) nonnisi inflorescentia ramosa differt, quam ob rem pro varietate haberem, qualem cl. Loiseleur in Herbier général des amateurs Tom. V. tab. 345 nomine Pitcairniae discoloris jam depinxit.

15. BILLBERGIA AMOENA Lindl. in bot. reg. ad tab. 1068 (pallida Lindl. bot. tab. 344. Beer Bromel. p. 121, quoad syn. cit., Tillandsia amoena Lodd. bot. cab. t. 76). — K. Koch ind. sem. h. Berol.

Folia supra sordide, subtus punctis albis densissimis canescenti-viridia, scapina bracteiformia, rosea, patula; scapus glaber, virescens, parviflorus; flores solitarii, patentes aut patuli, inferiores bracteis magnis roseis, superiores contra minutis fulcrati, germine et sepalis glaberrimis, flavo-virescentibus; petalorum lamina inferne rubescens, superne coerulea, revoluta.

β. pedicellis plurifloris. *Billbergia chlorocyanea* Hort. (et? de Vr.) *Pitcairnia discolor* Loisel. in Herb. génér. de l'amat. IV. t. 335. (*Billbergia discolor* Beer Bromel. 121 inflorescentia cernua differt).

16. BILLBERGIA MEYENDORFII Regl. hort. bot. Petrop. 1857. — Petalis basi nudis, scapo subnullo. — Planta speciosa caule abbreviato, 1—2 pollicari, dense folioso. Folia nitida, glaberrima, patentia, ligulata, spinuloso-serrata, acuta v. ex apice obtuso acuminata, basi latiore caulem amplectentia et margine nuda, 1½—2 ped. longa, 1—1¼ poll. lata; folia superiora (floralia) minora et omnino sanguinea v. basi apiceque sanguinea et medio viridia. Thyrsus capitato-spiciformis sessilis immersus, bracteatus; bracteis linguliformibus, concavis, membranaceis, apice cucullato-obtusis, albis et apicem versus virescentibus, 1½ poll. longis, calycem aequantibus. Flores breviter pedicellati. Calyx superus, profunde tripartitus, albidus et apicem versus viridis, laciniis se invicem tegentibus, ligulatis, erectis, rotundato-acutis, pollicem longis. Corolla 1½ poll. longa, calycem superans, petalis subcarnosis, unguiculatis erectis, acutis, unguibus albis, calycem aequantibus, basi nudis, limbo caeruleo. Stamina tubum aequantia; antheris oblongo-lanceolatis, dorso affixis. Germen inferum, stylo staminum longitudine, stigmatibus tribus spiraliter tortis. Patria Brasilia. Affinis B. cruentae Bot. Mag. tab. 2892. — Habitus omnino Nidularii. — Billb. cruenta l. c. differt: foliis latioribus, 3 pollices latis, transverse zonato-pruinosis, involucrantibus, apice tantum sanguineis; bracteis ovatis herbaceis, inferioribus calyce longioribus, petalis basi interiore squamiferis. — Nidularium splendens H. Hambrg. Bromelia Carolinae Ortg. Gartenflora tab. 211. — Bromelia Carolinae Beer (Fam. der Brom. p. 29), differre videtur foliis 1½ ped. longis, 2½ poll. latis, floribus ½ poll. longis. (Rgl.)

17. BILLBERGIA CHLORO-CYANEA de Vriese. — Hort. acad. Lugd. Batav. pl. rar. 1854.

F. elongatis, canaliculatis, marg. minute ac remote aculeatis, imo mucronulatis; scapo erecto, racemoso, laevissime roseo; bract. pulcherrime incarnatis, lanc., ap. angustato-acuminatis; fl. juniores superantib., adultos subaequantib.; fl. binis in pedunc. communi complanato, quor. alter sessilis, rectus, alter pedicello ovarium floris sessilis aequanti insidens et incurvus; calyx corolla ⅓ brevior, viridis, laciniis ap. caeruleis; corollae viridis laciniis ap. cyaneis, revolutis; staminib. exsertis; stylo stamina longe superante, stigmate trifido.

Brasilia? — (Linnaea XXVI. p. 755).

18. BILLBERGIA QUESNELIANA Ad. Brong. — Fl. d. serres X. tab. 1028. p. 157.

Caule elongato erecto dense folioso, f. rigidis patentibus recurvisq. b. dilatatis canaliculatis, externe transverse albo-subzonatis, ap. acutis marg. dentibus tenuibus dentatis serrato-aculeatis, superioribus in bracteas sensim mutatis scapo adpressis lanc-acutis, fl. in paniculam coarctatam spiciformem cylindricam digestis, bract. ovatis integerrimis, tranverse plicatis b. convolutis externe roseis lanugine alba inspersis flores suboccultantibus, sepalis erectis obtusis roseis, petalis conniventibus oblongis concavis obtusis ap, coeruleo-violaceis. — Ad. Brong.

B. Quesneliana Ad. Brong. in Ann. Sc. nat. 2 ser. XV. p. 872 et velins du mus. ann. 1841. (fig. ined.) — *Quesnelia rufa* Gaud. voy. de la Bonite, Atl. et hortulan.

E Guiana gallica in hortos introducta a Quesnelio.

19. BILLBERGIA? POLYSTACHYA. — Paxton fl. gard. III. p. 33. pl. 80.

F. canaliculatis spinoso-dentatis ap. recurvis b. ventricosis scapo brevioribus, spica conica polystachya farinosa, bract. subrotundis acuminatis arcte imbricatis.

Planta Brasiliana, Billbergiae rhodocyaneae affinis.

Icones addendae.

BILLBERGIA ROHANIANA de Vr. — Tuinbouw Flora I. p. 33. c. tab.
BILLBERGIA RHODOCYANEA Lem. (Walp. Ann. I. 838.) — Hook. bot. mag. tab. 4883.
BILLBERGIA MARMORATA Lemaire. — Lemaire Ill. hort. II. tab. 48. — F. 4—6 inaequalib. erectis imbricato-convolutis, caet.
BILLBERGIA CROYANA de Yonghe. — Lem. Jard. fl. IV. tab. 413.

1305. PITCAIRNIA *Hérit.*

(Walp. Ann. III. 621.)

SYNOPSIS SPECIERUM GENERIS PITCAIRNIAE

auctore C. Koch, ind. sem. h. Berol. 1857.

L'Heritier de Brutelle, in Britannia annis 1786 et 1788 moratus, in horto Guil. Pitcairnii, medici celebris, Bromeliaceam quandam vidit, quam merito typum novi generis sistere perspexit et in honorem possessoris Pitcairniam nominavit. Primaria haec Pitcairniae species in Heritieri serto anglico, anno 1788 edito, sub nomine P. bromeliaefoliae illustrata est.

Pitcairniae genus propter singularem pistilli conformationem Bromeliacearum tribum propriam repraesentat, quae carpophyllis singulatim clausis, sed inter se vix concretis, hinc pistillo tripartibili distincta est. Accedit ut pedunculus apice incrassatus vertice in foveam excavetur, quacum pars inferior carpophyllorum immersa concrescit, quam ob rem Pitcairniae germen semi inferum esse et postremo in capsulam tripartibilem mutari dicitur.

Pistilli indole duo inprimis genera Bromeliacearum Pitcairniae accedunt, alterum a cel. Schultes filio in systemate vegetabilium a patre et Roemero inchoato a. 1830 sub nomine Brocchiniae propositum, alterum a me ipso in appendice ad ind. sem. hort. Berol. a 1854 sub nomine Platystachydis descriptum. Utriusque una tantum species hucusque cognita est, sed verisimile est complures Tillandsias inflorescentia complanata praeditas ad Platystachydis genus amandandas esse, neque vero omnes, ut cl. Beer in monographia sua Bromeliacearum mere ex habitu censet. Brocchinia et Platystachys enim non solum habitu a Pitcairnia differunt, quum prior staminibus inter se et cum perigonio ad medium usque connatis, posterior staminibus spiraliter contortis distinguatur.

Porro cl. A. Brongniart, Bromeliacearum monographus peritissimus, genus Pitcairniae affine sub nomine Neumanniae proposuit. Species ab auctore huic generi adscriptae cum aliis quinque, quas ipse adjeci, singulari habitu gaudent, foliis scilicet Maidi simillibus, inflorescentia dense spicata, bracteis magnis coloratis plurifariam dispositis et floribus omnino sessilibus; gravissimum autem ex sententia autoris discrimen, ovula tenuissima basi apiceque appendice filiformi praedita, minoris momenti esse videtur, quum et Pitcairniae species nonnullae ovulis tenuioribus longissime appendiculatis ornatae sint, quod jam Ruiz et Pavon viderunt, qui semina Pitcairniarum ab ipsis propositarum „utrinque seta longa aucta esse" dicunt. Habitus quoque differentia paululum vacillat, quum P. densiflora Brongn., ipsaque P. Altensteinii Lem. Neumanniae accedant. Nihilominus Neumanniae genus, ad interim et usquedum omnes Pitcairniae species quoad ovulorum structuram diligenter examinatae sint, servabo.

Genera, quae cl. Beer in monographia Bromeliacearum sua a Pitcairnia sejunxit, Phlomostachydem, Cochlopetalum et Orthopetalum, non admitto. Phlomostachys quidem habitu singulari distinguitur, sed differentiae gravioris momenti, e floris fructusque indole petendae, desunt. Reliqua duo, ne habitu quidem singulari gaudentia, in varia petalorum directione nituntur. Orthopetalo scilicet petala sunt erecta, Cochliopetalo apice revoluta, Pitcairniae sensu Beerii restrictae corolla subgaleata, quae notae in nonnullis speciebus ambiguae, in aliis non satis accurate indicatae. Ita ut, Beerii generibus acceptis, de multis speciebus dubium restaret, quo in genere quaerendae sint.

Denique cl. Lemaire in diario suo „Jardin fleuriste" (II. 127) Lamproconi genus promulgavit, in quo P. Altensteinii Lem., densifloram Brongn. et undulatam Scheidw. col-

locavit. Hujus quoque generis character distinctivus certus et definitus frustra quaeritur et cl. Lemaire ipse habitu magis quam notis essentialibus ductus esse videtur.

In appendice catalogi seminum anno praeterito editi Pitcairniae species in sectiones sex distribui, quas hic accuratius constitutas denuo propono.

I. LAMPROCONUS.

Turiones inermes; folia disticha, elongata, basi canaliculato-concava, ceterum maidiformia (i. e. laxa, remote undulata, medio late canaliculata), omnino inermia; spica densissima, bracteis latis calycem obtegentibus praedita; flores tenues, erecti; petala basi squamigera.

1. PITCAIRNIA ALTENSTEINII Lem. (fl. d. serr. II. descr. ad tab. 162; *P. undulata* Scheidw. fl. d. serr. II. t. 162; *P. undulatifolia* Hook. bot. mag. t. 4241; *Puya Altensteinii* Klotzsch in Lk., Kl. et O. icon. pl. rar. hort. Berol. I. t. 1; *Lamproconus Altensteinii* Lem. in jard. fleur. II. t. 127; *Phlomostachys Altensteinii* Beer Bromel. 48.)

Folia nuda aut subtus passim punctis albis conspersa, scapum superantia; bracteae amoene rubicundae, calycem superantes; spica brevis, ovata; petala albo-flavescentia (nec rubentia ut cl. Tenore ait).

β. *gigantea*. Nullo modo, excepta magnitudine, a specie genuina differt. (*Puya macrostachya* A. Dietr. in O. et Dietr. allg. Gartenz. XVI. p. 146; *Puya Altensteinii* β. *gigantea* Hook. bot. mag. t. 4309; *Lamproconus giganteus* Lem. jard. fleur. II. ad tab. 127; *Phlomostachys Altensteinii* β. *gigantea* Beer Bromel. p. 46.)

2. PITCAIRNIA DENSIFLORA Brongn. (in hortic. univ. VI. p. 228. c. ic.; *P. aurantiaca* Ten. ind. sem. hort. bot. Neap. a. 1855).

Folia passim punctis albis conspersa, scapum superantia; petala lateritio-aurantiaca.

Clariss. Tenore hanc plantam sub nomine P. aurantiaca in indice sem. hort. bot. Neap. a. 1855 hisce verbis descripsit: P. inermib. loriformib. undulatis scapo tripedali longiorib.; spica strobiliformi bract. foliaceis imbricatis pallide virentib.; fl. semisuperis; perig. sexpartiti laciniis 3 exteriorib. calycinis persistentib. pubesc. albo-virentib., 3 interiorib. petaloideis croceis convolutis ap. galeatis incumbentib., b. squama bifida instructis; staminib. annulo perigyno insertis.

II. MAIDIFOLIAE K. Koch l. c.

Turiones inermes; folia undique directa, saepe elongata, ad basin canaliculato-concava aut petiolata, ceterum maidiformia, omnino inermia interdum denticulata; spica densiuscula, bracteis plerumque latis, calycem attingentibus praedita; flores flavescentes, rarissime rubentes, latiusculi, oblique hiantes, subringentes; petala apice lata.

1. PITCAIRNIA FUNKIANA A. Dietr. (in O. et Dietr. allg. Gartenz. XIX. p. 337; Reg. Gartenfl. III. t. 113; *P. macrocalyx* Hook. bot. mag. t. 4705; Beer Bromel. p. 52; *Puya Funkiana* Hort. Lind.; *Phlomostachys Funkiana* Beer Bromel. p. 47).

Folia nitida, omnino nuda, caulina denique bracteaeformia, subtus albido-furfuracea, scapum longitudine aequantia; spica anguste pyramidalis, laxiuscula, bracteis flavo-virentibus, calycis apicem non attingentibus praedita; flores denique refracti, flavidi. K. Koch. l. c.

Clariss. Hooker plantam sub nomine P. macrocalyx hisce verbis descripsit: F. radicalib. longissimis lanc. acuminatissimis inferne longe attenuatis vaginantib. glaberr. submembranac. costatis inermib. caulinis sensim minorib., caule elongato subfurfuraceo-lanato tereti, racemo laxiusculo. fl. (albis) patentib. demum reflex., bract. ovatis concav. acuminatis calycem longitudine aequantib., pedicell. brevissimis, calycis (flavi) ampli sepalis ovat. acuminat. appresso-conniventib., pet. oblongo-lin-spathulatis

subtortis b. esquamosis, ovario supero. — Ex America meridion. prov. Venezuela, in hortos translata.

4. PITCAIRNIA ZEIFOLIA C. Koch l. c. (app. ad ind. sem. hort. bot. Berol. a. 1854 p. 11.)

Folia petiolata, nitida, etiam caulina omnino nuda, scapum aequantia aut ab eo superata; spica laxiuscula, anguste pyramidalis, bracteis rubicundo-flavescentibus, calycis apicem attingentibus praedita; flores patentes, flavidi.

Auctor anno 1854 l. c. plantam hisce verbis adumbrat:

Folia radicalia longissima, maxime acuminata, basi in petiolum vaginantem canaliculatum attenuata, duriusculo-membranacea, glaberrima, margine subrevoluto-undulata, caulina sensim minora, omnia inermia; caulis elongatus, simplicissimus, superne pallide virescens; bracteae concavo-convolutae, ovato-lanceolatae; flores pedicello brevi et crasso insidentes; calycis triangulati sepala oblonga, concava, longitudine bractearum; petala elongate lineari-oblonga, contorto-convoluta, medio recurvata, longitudine staminum annulo perigyno vix manifesto insertorum.

Planta a cl. de Warszewicz in Guatemala collecta, 3 pedalis; folia radicalia flaccida, supra opaco-, subtus pallide et nitenter viridia, 2—2½ ped. longa, medio 2 poll. lata, caulina sensim minora, suprema ad squamam caulem arcte includentem elongato-lanceolatam longe cuspidatam redacta; bracteae patulae, pollicares, inferiores virides, superiores, apice excepto, viridi-cinnabarinae; flores elongati, recurvati, virescenti-albidi; stigmata oblonga, spiraliter torta, exserta; germen triloculare, triangulare; placentae centrales bifidae, ovulis horizontalibus teretibus dense obsitae. (Germen e carpellis tribus inter se connatis compositum est, placentae revera marginales ideoque, marginibus carpelli e centro in loculum protensis et secedentibus, bifidae.)

5. PITCAIRNIA VIRESCENS C. Koch l. c. (*Puya virescens* Hook. bot. mag. t. 4991.)

Folia basi dilatato-ventricosa, lineari-lanceolata, breviter et tenuissime acuminata, a scapo superata; spica laxiuscula, subcomposita, bracteis ovato-lanceolatis, flavo-virentibus praedita; flores patentes, pallide luteo-virescentes.

6. PITCAIRNIA RECURVATA C. Koch l. c. (*Puya recurvata* Scheidw. in O. et D. allg. Gartenz. X. p. 275).

Folia petiolata, elongata, supra nitida, subtus albido-furfuracea, a scapo elongato foliis lanceolatis bracteaeformibus adpressis obsito superata; spica laxiuscula, anguste pyramidalis, bracteis roseis, arcte adpressis instructa; flores denique recurvati, albo-straminei.

7. PITCAIRNIA SUAVEOLENS Lindl. (bot. reg. t. 1069) Koch l. c.

Folia lineari-ensiformia, acuminata, submaidiformia, supra laete virentia, subtus albido-furfuracea; scapus glaberrimus; spica laxiuscula, pubescens, bracteis ovato-lanceolatis pedicellos superantibus onusta; sepala papyracea, flavo-virentia; petala lutea, basi squamigera.

8. PITCAIRNIA SULPHUREA Andr. (bot. repos. t. 244., *P. bracteata* var. *sulphurea* Ker in bot. mag. t. 1416) Koch l. c.

Folia flavida, mox recurvata, subtus albido-furfuracea, a scapo floccoso-furfuraceo foliis bracteaeformibus onusto superata; bracteae lanceolatae; ciliatae; flores pedicellati, patentes, sulphurei; petala basi squamigera.

Specimina in horto sub hoc nomine culta differunt foliis a medio ad apicem subtiliter denticulatis et a basi patenti-recurvatis. An diversa? Affinis P. xanthocalyci Mart., quae folia duplo longiora, supra medium recurvato-dependentia habet.

9. PITCAIRNIA XANTHOCALYX Mart. (Ind. sem. hort. bot. Monac. a. 1848. adn. p. 4). — Koch l. c.

Folia subtus albido-furfuracea, supra medium recurvato-dependentia, laxa, subtiliter denticulata, scapo parce floccoso foliis lanceolatis obsito superata; bracteae lanceolatae; flores pedicellati, patentes, ochroleuci.

In *descriptione* Martii folia integerrima dicuntur, quae autem in specimine *ipso* ex horto botanico Monacensi accepto etiam supra medium denticulata. Habitu convenit cum P. sulphurea horti Berolinensis, sed folia duplo longiora, patentia, superne eleganter recurvata, imo dependentia.

10. PITCAIRNIA UNDULATA Scheidw. (in O. et D. allg. Gartenz. X. p. 275; Lem. hort. univ. VI. p. 134 c. ic. Lamproconus undulatus Lem. jard. fleur. II. ad tab. 127). — Koch l. c.

Folia insigniter petiolata, oblonga, lata, planiuscula (quam ob rem nomen minus aptum), subtus argenteo-furfuracea, caulina omnia bracteaeformia, scapum subaequantia, erecta; spica laxiuscula, rubicunda, bracteis pallide virentibus calyce minoribus instructa; flores intense rubri.

Species pulchra, habitu singulari et floribus rubris ab hac sectione alienis gaudens, foliis petiolatis Neumanniae similis, sed quum ovula appendicibus careant Pitcairniis adnumeranda.

III. ARMIGERAE.

Turionum folia margine deorsum spinescentia, caulina inferiora basi patula, late canaliculata, sursum vel interdum deorsum spinescentia, ceterum lineari-lanceolata, margine planiuscula, interdum submaidiformia, nunquam laxa; spica laxa, bracteis angustis, plerumque pedicellum superantibus, rarissime latis praedita; flores angustiores, plerumque oblique hiantes, interdum, petalis inter se aequalibus, erecti, rubescentes, rarius albidi aut violacei.

A. *Petala ad basim squamula instructa.*

11. PITCAIRNIA BRACTEATA Ait. (hort. Kew. ed. 2. II. p. 202; bot. mag. tab. 2813; *P. Gireoudiana* Dietr. in allg. Gartenz. XXI. p. 105). — Koch l. c.

Folia subpergamenea, supra nitida, subtus albido-glaucescentifurfuracea, ad basin tantum fusco-spinescentia, a scapo floccoso-furfuraceo superata; spica capituliformis, bracteis magnis imbricatis calycem paene superantibus instructa; petala lurido-rubescentia, basi squamula crenata vestita.

P. *latifolia* Red. Lil. tab. 73 et 74 et Wendl. hort. Herrenh. t. 3, quae vulgo ad *P. bracteatam* Ait. citatur, — Koch l. c. — ab hac discrepat inflorescentia elongata bracteisque multo minoribus et aut speciem propriam constituit, aut ad *P. latifoliam* Ait. reducenda est, a qua praesertim floribus sessilibus differre videtur. — *Pitcairnia bracteata* Ait. var. *fulgens* Regel Gart. Flor. 1853. p. 450. — Caule bracteisque glabris. — In horto bot. Turiaco florens.

12. PITCAIRNIA DECAISNEI C. Koch l. c. (*P. fulgens* Dne. in O. et D. allg. Gartenz. XIX. p. 26).

Folia lorato-lanceolata, submaidiformia, laxa, patenti-recurvata, denique dependentia, basi spinoso-dentata, subtus albido-furfuracea, scapum floccosum aequantia; spica densa, bracteis magnis glabris calycem paene omnino tegentibus instructa; sepala carinata; petala erecta, fulgidorubra, basi squamula lunulata instructa.

13. PITCAIRNIA LATIFOLIA Ait. (hort. Kew. ed. 1. p. 401; bot. mag. tab. 856). — Koch l. c.

Folia carnosulo-pergamenea, patentia, supra laete viridia, medio latiora, ad basin spinescentia, supra medium remote serrulata, subtus

minus furfuracea; spica lineari-oblonga, bracteis plerumque pedicellos breves subaequantibus instructa; flores approximati; sepala aurea; petala rubra, basi squamula integerrima vestita.

14. PITCAIRNIA PLATYPHYLLA Schrad. (in Blumenb. p. 26. tab. 3; *P. latifolia* Andr. bot. repos. tab. 322). — Koch l. c.

Folia membranaceo-pergamenea, erecto-patentia, supra laete viridia, subtus albido-furfuracea, ad basin spinescentia, ceterum integerrima; panicula subthyrsoidea floribus distantioribus; bracteae mediae pedicellis breviores; petala rubra, basi squamula integerrima vestita.

15. PITCAIRNIA ALBUCAEFOLIA Schrad. (in Blumenb. p. 24 tab. 3. et in pl. rar. hort. Goetting. fasc. 1). — Koch l. c.

Folia patenti-recurvata, submaidiformia, laxiuscula, supra viridia, subtus albido-furfuracea, ad basin spinescentia, scapum furfuraceum subaequantia: spica subpyramidalis, bracteis pedicellos superantibus praedita, laxa; petala basi squamula apice dentata onusta.

16. PITCAIRNIA INTEGRIFOLIA Gawl. (in bot. mag. tab. 1462; *P. graminifolia* hort. nonn. neque vero hort. bot. Berol.). — Koch l. c.

Folia patenti-recurvata, linearia, supra viridia, subtus albido-furfuracea, basi tantum parum spinescentia, scapo floccoso-furfuraceo breviora; spica ramosa, laxiuscula, lanuginosa; bracteae pedicellos superantes; petalorum squama dentata.

P. decora A. Dietr. (allg. Gartenz. XV. p. 352) e descriptione differt foliis supra nitidis, interdum passim furfure albo conspersis, latioribus, spica simplici pyramidali, densiflora; e speciminibus in horto botanico cultis vix nisi spica pauciramea et squamulis bipartitis aut geminatis ad petalorum basin a P. integrifolia differre videtur,

17. PITCAIRNIA FURFURACEA Bot. mag. (tab. 2657; *P. intermedia* hort. ex p.). — Koch l. c.

Folia elongata, a basi recurvato-dependentia, margine planiusculo toto remote spinoso-dentata, supra nitida, subtus albido-furfuracea, scapum subfurfuraceum subaequantia; spica remotiuscula, simplex aut basi ramo uno alterove praedita; bracteae pedicellos superantes, glabriusculae; germen glabrum; petala basi squamula rotundata instructa.

18. PITCAIRNIA RAMOSA Jacq. (eclog. p. 154. nec hort. nonn. *P. furfuracea* Jacq. p. 117, tab. 79; *P. intermedia* hort. ex p.; *P. Skinneri* hort.)

Folia patenti-recurvata, ad basin et saepe ad apicem margine spinoso-dentata, supra viridia, subtus albido-furfuracea, a scapo furfuraceo superata; bracteae furfuraceae, pedicellos aequantes; germen denique glabrum; petala basi squamula instructa.

Specimina in horto Berolinensi culta folia ad basin tantum spinescentia habent, ceterum cum icone Jacquini conveniunt.

19. PITCAIRNIA AFFINIS C. Koch l. c. (*P. pruinosa* hort. nec H. B. et K.; *Pourretia magnispatha* hort. nec Coll.).

Folia patenti-recurvata, subtus densissime, supra sparse albido-furfuracea, planiuscula, ad basin spinescentia, scapum floccoso-furfuraceum subaequantia; racemus densiusculus, floribus ad basin saepe binis aut ternis; bracteae pedicellos superantes; germen glabriusculum; petala basi squamula parvula instructa.

P. ramosa hort. differt tantum foliis supra rariori furfure vestitis, magis erecto-recurvatis. Flores mihi ignoti.

20. PITCAIRNIA BROMELIAEFOLIA l'Her. (sert. angl. p. 7. tab. 11; Schneev. ic. IV, tab. 11). — Koch l. c.

Folia erecto-patentia, superne vix recurvata, supra nitida, viridia, subtus albo-furfuracea, plana, a basi supra medium spinescentia, scapum plerumque superantia; bracteae pedicellos flores aequantes superantes; spica glaberrima; petalorum squamula truncata, crenata.

P. *bromeliaefolia* Red. (Lil. tab. 75; P. Redouteana Beer Bromel. p. 57) folia latiora habet, iis P. latifoliae similia. In horto nostro specimen colitur, quod forsitan cum hac congruit. *P. bromeliaefolia* bot. mag. tab. 824 et bot. reg. tab. 1011 foliis margine toto spinoso-dentatis, rigidioribus discedit.

21. PITCAIRNIA ANGUSTIFOLIA Ait. (hort. Kew. ed. 1. p. 401; *P. tomentosa* Dietr. Nachtr. z. Gärtnerlex. VI, p. 305; Beer Bromel. p. 64). — Koch l. c.

Folia erecto-patentia, rigida, vix recurvata, linearia, supra nitida, viridia, sublus albido-furfuracea, undique remote curvato-spinescentia, scapo plerumque breviora; spica, densiuscula, tomentosa; bracteae pedicellos patentes superantes; petalorum squamula bifida.

22. PITCAIRNIA REDOUTEANA R. et S. (syst. veget. VII, 2. p. 1243; *P. angustifolia* Red. Lil. tab. 76; Beer Bromel. p. 64).

Folia erecto-patentia, rigida, vix recurvata, angustissime linearia, concava, supra nitida, viridia, subtus albido-furfuracea, undique remote spinescentia, scapo plerumque breviora; spica saepe ramosa, laxiuscula, tomentosa, bracteae pedicellis patentibus breviores.

23. PITCAIRNIA CARICIFOLIA Mart. (in R. et S. syst. veget. VII. 2. p. 1242., Koch l. c.

Folia patenti-recurvata, laxiuscula, anguste linearia, supra glabra, subtus albido-furfuracea, basi crebro-spinescentia, ad apicem denuo dentibus pungentibus remotis praedita, scapum floccoso-furfuraceum superantia; spica pauciflora, laxa, tomentosa; bracteae pedunculos erectos paulo superantes; petalorum squamula irregulariter dentata.

24. PITCAIRNIA HUMILIS Ten. (ind. sem. hort. Neap. 1855). — Koch l. c.

Folia erecto-patentia, rigida, vix recurvata, linearia, supra nitida, subtus albido-furfuracea, margine toto spinoso-serrata, scapo subbreviora; spica pauciflora; bracteae minimae, pedicellis calycem longitudine aequantibus multo breviores; petalorum squama bifida.

P. caricifoliae simillima esse videtur. — Clarissimus Tenore l. c. plantam hisce verbis adumbrat: — F. linearib. canaliculatis, scapo subped. breviorib., denticulato-spinosis; fl. racemosis; racemo laxo paucifl.; pedunc. subpollicarib.; perigonii semisuperi laciniis 3 exteriorib. calycinis fusco-rufis, 3 interiorib. petaloideis subconvolutis coccineis, calyce triplo longiorib., b. squama bifida instructis. — Patria...

25. PITCAIRNIA JACKSONI Hook. (bot. mag. t. 4540). — Koch l. c.

Folia erecto-recurvata, rigida, subulato-ensiformia, carinata, subtus albo furfuracea, supra medium (in icone a basi ad apicem) spinescentia spica floccoso-furfuracea, laxiuscula; bracteae pedicellos patentes aequantes aut superiores superantes; squamula petalorum bifida, serrata.

In horto botanico nostro species nomine P. Kegelianae (e horto botanico Halensi allata) colitur, quae medium fere inter P. Jacksoni et P. caricifoliam tenere videtur, ad priorem paulo magis accedens, a qua differt foliis minus rigidis, non carinatis. K. Koch l. c.

Clarissimi Hookeri plantae descriptio loco supra citato haec est:

F. subulato-ensiformibus carinatis subt. albo-furfuraceis supra medium spinoso-serratis, scapo simplici, pedicellis patentibus calycibusq. farinosis, sepalis obtusis, corollae curvatae petalis lin-oblongis subtortis longitudine staminum intus squamosis squama bifida serrata, stigmatib. ciliatis.

A. cl. Jackson e Guatimala in hortos introducta.

26. PITCAIRNIA ECHINATA Hook. (bot. mag. t. 4709). — Koch l. c.

Folia elongata, patenti-recurvata, rigida, ubique margine spinescentia, supra medium lanceolata, subtus parce albido-furfuracea; inflorescentia racemosa (racemoso-paniculata ?), laxa; bracteae pedicellum subaequantes; sepala flavo-virescentia, uncinato-glandulosa, petalis albidis duplo superata.

Descriptio clar. Hookeri l. c. verbis ipsissimis haec est: F. radicalib. elong. lanc. acutissimis striatis subt. parce farinosis spinuloso-serratis inferne attenuatis semicylindraceis (magis spinosis), caule parce folioso longissimo pulverulento-tomentoso sp. laxe racemoso-paniculato multifl., sep. setis mollib. flavo-virescentib. sp. uncinato-glandulosis echinatis, pet. albis calycem fere duplo superantib., staminib. styloq. inclusis. — Lem. jard. fl. IV. tab. 407. — Fl. d. serres VIII. tab. 847. p. 257. — Verosimiliter sp. ex Mexico in hortos allata.

27. PITCAIRNIA LONGIFOLIA Hook. (bot. mag. tab. 4775). — Koch l. c.

Caulescens; folia longissima, e lata basi amplectente et pubescente lanceolata, supra viridia, subtus albido-furfuracea, toto margine remote spinescentia; spica composita, floribus secundis; bracteae pedicellos aequantes; petala basi squamigera.

Descriptio auctoris ipsius haec est:

Caule erecto elongato simplici dense annulato, f. longissimis (4 ped.) e lata b. amplexanti striato pubescente lanceolatis acuminatissimis supra b. insigniter attenuatis viridib. spinuloso-ciliatis, panicula terminalis ramis racemosis, fl. secundis, pedicellis bracteolatis, sep. subulatis viridib. corolla coccinea triplo breviorib., petalis convolutis coccineis apicibus unilateralibus b. intus squamosis, staminib. styloque subexsertis corolla paulo brevioribus.

Planta ex agro Limensi a Guilh. Nation ad hort. Kewensem missa, quo in loco floruit in tepidario m. Decbr. 1853.

28. PITCAIRNIA LANUGINOSA R. et P. (fl. peruv. III, p. 35, tab. 258; *Orthopetalum lanuginosum* Beer Bromel. p. 70). — Koch l. c.

Folia sibi invicem incumbentia elongato-ensiformia, ad basin spinoso-serrata, supra incana, subtus lanuginosa, scapum ad basin foliosum deinde squamis adpressis vestitum aequantia; spica lanuginosa; bracteae ovatae, concavae, pedicellum brevem superantes; petala apice erecta, subaequalia, violacea, basi squamula truncata quinquedentata instructa.

29. PITCAIRNIA PULVERULENTA R. et P. (fl. peruv. III. p. 36. tab. 259; *Orthopetalum ferrugineum* Beer Bromel. p. 71). — Koch l. c.

Folia imbricata, numerosa, elongata, ensiformia, inferiora petiolo canaliculato spinoso-serrato instructa, minutim dentata, supra glaberrima, incana, subtus pulverulenta, scapo longo inferne tantum folioso, superne pulverulento breviora; spica composita, floribus secundis, breviter pedicellatis; bracteae ovatae; petala erecta, coccinea, ad basin squamula brevi 2—3 crenata praedita.

Ad P. longifoliam Hook. spectat.

30. PITCAIRNIA MORITZIANA C. Koch et Bouché l. c. (ind. sem. hort. Berol. a. 1856, app. p. 4).

Folia a basi patenti-recurvata, laxiuscula, lineari-lanceolata, supra glabra, opaco-subvelutina, subtus albido-furfuracea, basi spinescentia, scapo tenui-floccoso breviora; spica simplex, pubescens; bracteae inferiores pedicellos adscendentes superantes; squamula petalorum parva aut obsoleta.

Huic speciei a cl. Moritzio e Guatemala introductae proxime accedunt florum colore: P. xanthocalyx Mart. et suaveolens Lindl., utraque autem folia basi non spinescentia

habet. Praeterea huic flores brevius pedunculati sunt et bracteae multo longiores. P. xanthocalyx minor et indumento magis sericeo, nec floccoso, sed tamen detersibili praedita. — P. Moritziana foliis umbraculi modo distributis jucundae faciei est, habitu ad Cordylinem umbraculiferam Goepp. accedens. Folia angusto-elongata, supra medium latiora, ad basin rigidiora et canaliculata, ad apicem contra laxiora et sensim attenuata, margine magis minusve undulata. Quum flores examinati non plane evoluti fuerint singularum partium descriptionem praetermittam.

31. PITCAIRNIA WARSZEWICZIANA Klotzsch (in Beer Brom. p. 66). — Koch l. c.

Caulis basi bulbiformis; folia patenti-recurvata, augusta, saepe submaidiformia, glabriuscula, basi spinoso-serrata, scapo foliis bracteaeformibus erectis instructo floccoso breviora; spica albido-tomentosa; bracteae lanceolatae, adpressae; petala pallide coccinea, ad basin squamula incisa margine libera instructa.

P. Karwinskianae Schult. proxime accedit, sed petalis squamigeris et foliis magis spinosis diversa esse dicitur. Utriusque specimina in horto nostro culta vix differre videntur, sed P. Warsz. floriferam nondum vidi.

B. *Petala basi nuda.*

32. PITCAIRNIA ASTEROTRICHA P. et E. (nov. gen. et sp. pl. II, tab. 158). — Koch l. c.

Folia ensiformia patenti-recurvata, supra nitida, glaberrima, subtus albido-furfuracea, spinoso-serrata, scapo elongato purpurascente breviora; spica composita, fulvo-lanuginosa, ramis bracteis serratis latis fulcratis; flores subsecundi; bracteae pedicellos superantes; petala purpurea.

33. PITCAIRNIA ALTA Hassk. (Retzia II, p. 5.).

Folia anguste linearia, canaliculata, patenti-recurvata, supra saturate viridia, subtus albido-furfuracea, basi spinescentia; scapus lanugine densa floccosa nec detersibili vestitus; bracteae lineari-lanceolatae, glabriusculae, a pedicellis longitudine superatae; petala coccinea.

34. PITCAIRNIA FERRUGINEA R. et P. (fl. peruv. III, p. 36; *Pourretia ferruginea* Spreng. syst. veg. II, p. 23).

Folia sibi invicem incumbentia, ensiformia, longa, subtus ferrugineo-tomentosa, undique margine spinosa; spica maxima, decomposita, ferrugineo-tomentosa; pedicelli remoti, bracteas ovatas triplo superantes, apice recurvi; flores nutantes: petala subpurpurea, elongata.

Nescio an Melinonia ferruginea Brongn. (nondum descripta?) eadem planta sit. Specimina juvenilia et nondum florifera, quae in horto coluntur, habitu differre videntur.

35. PITCAIRNIA PANICULATA R. et P. (fl. peruv. III, p. 36, tab. 260; *Pourretia paniculata* Spreng. syst. veget. I, 81).

Folia sibi invicem incumbentia, ensiformia, patenti-recurvata, supra incana, subtus pulverulenta, serrato-aculeata, scapo pulverulento declinato paulo breviora; spica maxima, decomposita, pulverulenta; bracteae pedicellis breviores; petala punicea, apice reflexo-patentia.

36. PITCAIRNIA VIOLACEA Brongn. (in Ann. de Fl. et Pom. I, p. 116.)

Folia patenti-recurvata, graminea, supra canaliculata, glabriuscula, subtus albido-furfuracea, scapo glabro breviora, margine toto spinoso-dentata; spica composita, glaberrima; bracteae a pedicellis brevibus longitudine superatae, parvae; sepala dilute viridia, petalis erectis azureis (ex icone) pluries superata.

Icon inflorescentiam subdistichum repraesentat, ideoque planta fortasse Platystachidis species.

37. PITCAIRNIA KARWINSKIANA Schult. (in R. et S. syst. veget. VII, 2. 1237; *P. ringens*

Klotzsch in Lk., Kl. et O. icon. pl. rar. hort. Ber. II, p. 63. tab. 65; *P. Montalbensis* cat. Lind. in O. et Dietr. allg. Gartenz. XIX, p. 138).

Caulis basi bulbiformis; folia patenti-recurvata, angusta, saepe submaidiformia, glabra, basi pauciserrata, scapo foliis bracteaeformibus erectis floccosis instructo breviora. Spica pubescens, densiuscula, simplex; petala roseo-coccinea; bracteae ovato-lanceolatae, pedicellum superantes aut aequantes.

Species singularis, aeque ac P. Warszewicziana Kl. in patria periodica, calido tempore aestatis bulbum relinquens.

38. PITCAIRNIA VALLISOLETANA Lex. (in R. et S. syst. veget. VIII, 2. p. 1238, ex errore *Vallidolitana* Ann. de Gand III, p. 412).

Caulis basi bulbiformis; folia ensiformia, angustissima, ultra basim margine spinoso-serrata, superiora incana, subleprosa (albido-furfuracea?); scapus articulatus (?), incarnatus, incurvus; flores alternatim spicati; bracteae laevigatae, ovatae, coccineae; petala rosea.

39. PITCAIRNIA SPLENDENS Warsz. (in O. et Dietr. allgem. Gartenz. XIX, 176: P. fulgens ibidem p. 187).

Caulis basi bulbiformis; folia patenti-recurvata, denique dependentia, lineari-lanceolata, glaberrima, basi spinoso-serrata, scapo parce floccoso paene duplo longiora; spica densa, floccoso-tomentosa; bracteae magnae, imbricatae, tomentosae, calyces saepe aequantes; sepala lanceolata, carinata; petala splendido-scarlatina.

Forsan eadem ac P. Warzewicziana Klotzsch, quae petalis squamigeris differre dicitur. — P. pungens et pruinosa H. B. et K. nov. gen. et sp. pl. II, p. 294 et 295 ob semina reniformia aut planiuscula ab hoc genere alienae et forsan Puyae adnumerandae sunt. — P. distacacia Beer (Bromel. p. 58; Tillandsia distacacia Fl. Flum. III. tab. 141) ob germen inferum Billbergiae species est.

40. PITCAIRNIA IRIDIFLORA Hort. Loud. (Beer Bromel. p. 51.)

Folia angustissima, canaliculata, erecta, rigidula, scapum humilem longe superantia, spinescenti-serrulata; spica densa: bracteae rigidae, erectae, longae, vix furfuraceae; petala lateritia.

Species mihi ignota, dubia, P. angustifoliae Ait. forsan accedens.

IV. ACAULES Koch l. c.

Turionum folia angustissima deorsum spinescentia, patentissima, inferiora in caule bulbiformi saepe latiora, in spinam desinentia, saepe ciliata, reliqua elongata, sublinearia, integerrima, saepe canaliculata: spica densissima, subcapitata, pauciflora, subsessilis, bracteis majusculis; flores rubentes, subringentes.

41. PITCAIRNIA EXSCAPA Hook. (bot. mag. tab. 4591). — (Walp. Ann. III. 621 n. 2).

Folia caulina inferiora coriacea, vaginiformia, ovato-lanceolata, in acumen subpungens attenuata, cetera rigida, lineari-elongata, canaliculata, integra, glaberrima, viridia, nitentia, erecta, interdum superne recurvata; bracteae lanceolatae, exteriores cum calyce hirsutae, spinis apicularibus nigro-fuscis intermixtis; petala coccinea, basi squamigera.

Specimina horti nostri foliis caulinis inferioribus angustissimis, patenti-recurvatis, margine deorsum spinescentibus ab icone discrepant. Turionum folia spinescentia sunt, Koch l. c. — Cl. Hookeri plantae descriptio haec est: Caule brevissimo pseudobulboso, f. fere omnino radicalib. lin-elongatis tenuissime longissime acuminatis integris, vaginis inflatis, marg. superne ciliato-asperis, spicis radicalib. capitatis ovatis imbricatim bracteatis subsessilib., bract. lanc-acuminatis exteriorib. calycibusq. hirsutis, spinis acicularibus nigro-fuscis intermixtis, petal. lin-oblongis galeato-curvatis b. intus nectariferis. — Patria Nova Granada. — P. suaveolenti propinqua.

42. PITCAIRNIA MORRENII Lem. (in jard. fleur. III. tab. 291; *Puya longifolia* Morr. in Ann. de Gand II. tab. 101; Paxt. flow. gard. I, tab. 86; *Pitcairnia Morrenii* et *longifolia* Beer Bromel. p. 67).

Folia inferiora coriacea, vaginiformia, ovato-lanceolata, pungenti-acuminata, nonnisi turioni proxima margine deorsum spinescentia, cetera rigida, lineari-lanceolata, canaliculata, integerrima, glaberrima, viridia, nitida, erecto-patentia, interdum superne recurvata; bracteae ovato-lanceolatae, sublanatae; petala coccinea, basi squamigera.

An P. exscapa Hook. et Morrenii Lem. satis diversae? — K. Koch l. c.

Descriptio plantae cl. Lemairii in diario suo supra citato haec est:

Acaulis f. biformib., exteriorib. b. dilatata bulbum falsum efformantibus, dein lin-subulatis marg. pinnatifido-aculeatis nigricantibus; interiorib. longe linearibus elongatis canaliculatis marg. laevib. ap. obtusiusculo, racemo sessili, sepalis lineari-lanceolatis carinatis, petalis in tubum hinc fissum convolutis ap. subregulariter subpatulis; staminib. subexsertis, antheris linearibus rectis, stylo exserto, stigmatib. spirali convolutis.

Lem. ex cl. Lindl. et ex fig. operis ejus citati hic mutuata. — Hab. America centralis.

43. PITCAIRNIA HETEROPHYLLA Beer (Bromel. p. 65; *Puya heterophylla* Lindl. bot. reg. XXVI. tab. 71).

Folia inferiora coriacea, vaginiformia, ovato-lanceolata, in acumen longum attenuata, margine deorsum spinescentia, cetera tenera, angusta, a medio ad basin et apicem attenuata, integerrima, parcissime pruinosa, opaco-viridia, erecta; bracteae lanatae, calycibus breviores; petala intense rosea, basi squama duplici instructa.

44. PITCAIRNIA LIEBMANNI C. Koch l. c. (*P. exscapa* Liebm. ind. sem. hort. Haun. a. 1848. p. 12.)

Folia inferiora cartilaginea, vaginiformia, lanceolata, costata, in acumen longissimum subulatum abrupte attenuata, margine spinoso-dentata, cetera lineari-lanceolata, graminea, integerrima, (? glaberrima); sepala lanceolata, subulata, carinata, lepidoto-lanata; petala rosea, basi nuda.

45. PITCAIRNIA CERNUA Kth. et Bouché (ind. sem. hort. Berol. a. 1848. p. 12.) Koch l. c.

Folia inferiora coriacea, vaginiformia, lanceolata, in acumen longissimum recurvatum attenuata, margine deorsum spinescentia, reliqua rigida, lineari-elongata, canaliculata, superne planiuscula, supra passim furfure albido parce conspersa, erecta, superne interdum recurvata; spica densa, tereti-oblonga, subcernua; bracteae lanuginosae; petala cinnabarino-coccinea, supra basin saccato-excavata.

P. monstrosa Beer (Bromel. p. 68) certe varietas monstrosa, nec species propria est.

V. INERMES.

Folia turionum brevissima, reliqua elongata, carnosula, plerumque isomorpha, omnia integerrima; spica simplex, rara composita vel thyrsoidea; bracteae lanceolatae; flores angusti, erectiusculi, rubentes, pedicello brevi erecto-patenti insidentes; petala plerumque basi nuda.

46. PITCAIRNIA FLAMMEA Lindl. (in bot. reg. tab. 1092).

Folia erecta, basi quasi caulem inferne brunnescentem formantia, supra medium laxiuscula, recurvato-dependentia carnosula, supra glabra, subtus albido-furfuracea; scapus glaberrimus; bracteae pedicellum glaberrimum coccineum superantes; sepala anguste lanceolata, coccinea; petala sanguinea, erecta.

47. PITCAIRNIA OLFERSII Lk. (Verhandl. d. Ver. z. Bef. d. Gartenb. VII. p. 363. t. 3).

Folia erecta, basi quasi caulem inferne brunnescentem formantia, supra medium laxiuscula, recurvato-dependentia, carnosula, supra glabra, subtus albido-furfuracea; scapus glaberrimus; bracteae pedicellos virescentes glaberrimos superantes; sepala lanceolata, aeque ac petala recta scarlatina.

Vix specie differt a P. flammea Lindl. — P. l'Herminieri hort. Par. eadem planta esse videtur, sed foliis latioribus paululum discrepat.

48. PITCAIRNIA CINNABARINA A. Dietr. (in allg. Gartenz. XVIII. p. 202).

Folia erecta, quasi caulem inferne brunnescentem basi formantia, supra medium recurvata, planiuscula, carnosula, glaberrima, supra intense viridia, subtus punctis crebris brunnescentibus praedita, scapum glaberrimum superantia, juniora omnino aut ad basin brunnea; bracteae pedicellos paululum superantes; sepala lanceolata, dorso carinata, ut petala rectiuscula cinnabarina.

49. PITCAIRNIA AUSTRALIS C. Koch l. c. (app. ad ind sem. hort. Berol. a. 1856).

Folia erecta basi quasi caulem formantia, supra medium recurvata, glaberrima, carnosula, supra et subtus viridia, a scapo glaberrimo superata; bracteae inferiores medio recurvatae, pedicellos elongatos adscendentes paulo superantes; sepala lanceolata, ut petala vix ringentia rubentia.

Descriptio plantae auctoris anno 1856 l. c. data haec est:

Turionum squamae integerrimae, adpressae; folia glaberrima, dilute viridia, infra medium canaliculata, supra plana, sensim in cuspidem attenuata, recurvata; scapus tenuis, glaberrimus; bracteae anguste lanceolatae, inferiores floribus longiores; petala rubentia, subringentia, basi nuda; stigmatum capitulum lineari-oblongum, tricyclum, ex antheris emergens.

Ex horto botanico Parisiensi introducta est. Folia elongata, 2—2¼ ped. longa, medio 1¼ poll. lata, basi marginibus inflexis scapum ambeuntia, initio erecta, deinde recurvata, supra medium lanceolata. Scapus 2 ped. longus, inferne foliis minoribus erectis, lanceolatis, sensim minoribus obsitus. Spica semipedalis, floribus sub 20, pyramidalibus praedita, glaberrima. Bracteae inferiores patentes, medio recurvatae, elongatae, lineari-lanceolatae, ceterae sensim minores, superiores denique pedicello adscendenti roseo semipollicari vix longiores eique accumbentes. Sepala basi inter se et germini adnata. Germen ovato-pyramidale, trigonum, trisulcum, sensim in stylum superne rubrum et stamina superantem attenuatum; stigmatum capitulum rubrum, lineari-oblongum, tricyclum. — Cum P. rubicunda C. Koch, id quod jam supra dixi, ejusdem sectionis est, sed major, minor tamen quam P. flammea Mart. et Olfersii Lk. Folia P. australis paululum rigidiora, supra dimidium arcu rejiciuntur, nequaquam laxe superpendent, ut in illis, quibus etiam petala basi squamigera sunt. A P. rubicunda denique discrepat defectu lanuginis detersibilis.

50. PITCAIRNIA FULGENS Rev. hort. (a. 1836 Janv.; Dietr. n. Nachtr. z. Lex. d. Gaert. u. Bot. VII. p. 44).

Rhizoma ramosum; turiones violacei; folia lineari-lanceolata lorata, acuminata, scapo flavescenti-viridi breviora; spica simplex, bracteis lanceolatis, angustis, coloratis; petala splendide scarlatina.

Species ante multos annos Parisiis culta, nobis plane ignota, quae turionibus coloratis ad P. cinnabarinam A. Dietr. propius accedere videtur.

51. PITCAIRNIA NUBIGENA Planch. (fl. d. serr. VII, tab. 847).

Folia supra medium recurvata, plana, utrinque glaberrima, intense viridia, elevato-nervosa, vaginis petiolaribus puberula, scapo lana floccosa

decidua sparse vestito, apice glaberrimo superata; racemus pyramidalis; bracteae angustae, pedicellos vix aequantes; sepala lanceolata, carinata, rubida; petala inferne albida, ceterum amoene coccinea, basi intus squama duplici instructa.

Koch l. c. — Planch. l. supra citato hisce verbis plantam describit:

F. lineari-lanc. acuminatissimis ap. acuto, aridis marg. laevi integris planiusculis utrinque laete viridibus glabris, vaginis petiolaribus puberulis, scapis terminalib. erectis inferne foliis mox bracteis linearibus vestito lana floccosa decidua sparso ap. glaberrimo, racemo pyramidali densiusculo multifloro, bracteis linearib. scariosis acutis pedicello brevioribus, florib. glaberrimis, laciniis calycinis e b. oblonga linearibus acutissimis dorso carinatis rubidis petalis calycem plus duplo superantibus late linearibus acutis inferne albidis superne amoene coccineis intus b. squama duplici duplicatis, staminib. stylo aequilongis antheris aureis, ovario pyramidiformi trigono.

Pitc. nubigena Pl. et Lind. Flor. Columb. ined.

Hab. Columbia, prov. Merida et Venezuela in alt. 8000—9000'; Funk et Schlim legerunt.

52. PITCAIRNIA RUBICUNDA C. Koch (app. ad ind. sem. hort. Ber. a. 1856. p. 3; P. Moreliana hort. nonn.)

Folia basi vix pseudocaulem brevem formantia, elongata, supra medium recurvata, supra concava et intense viridia, juniora subtus albido-furfuracea, a scapo glabro, foliis bracteaeformibus utrinque furfuraceis praedito superata; bracteae pedicellis adscendentibus vix majores; petala rubentia.

Koch l. c. — Descriptio auctoris ann. 1856. data, hisce verbis circumscribitur:

Folia turionum squamiformia, integra, reliqua supra intense viridia, subtus lanugine furfuracea detersibili vestita, integerrima, elongato-linearia, ad partem superiorem lanceolata, laxa, dependentia; scapus glaberrimus; bracteae pedicellis adscendentibus vix longiores; petala rubentia, basi nuda, subringentia, staminibus longiora; stigmatum capitulum 3—4 cyclum, antheris occultum.

Ex hortis belgicis Berolinum allata est, sine dubio brasilianae originis. Folia $1^1/_4$ ped. longa, medio 6—8 lin. lata et margine subundulata, ad basin involuto-canaliculata, ad apicem contra lanceolata et recurvata. Scapus foliis longior, tenuis, glaberrimus, foliis bracteiformibus ad apicem sensim minoribus, lanceolatis, erectis, lanugine detersibili utrinque obsitis praeditus. Spica 4—6 poll. longa, glaberrima, 12—15 flora; bracteae inferiores ceteris breviores, basi latae, lanceolatae; pedicelli rosei, 5—6 lin. longi. Flores amoene rubentes, elongati, $1^1/_4$—2 poll. longi. Calyx trigonus, trisulcus, 9—10 lin. longus; petala elongata, linearia, superne latiora; antherae basi affixae, luteae, petalis breviores; stylus $1^1/_4$—$2^1/_4$ poll. longus, rubens, staminibus brevior; stigmatum capitulum 3—4 cyclum, germen ovali-pyramidale, 3 sulcum, trigonum.

53. PITCAIRNIA RHODOSTACHYS Hassk. (in Retzia II, p. 8).

Caespitosa; folia lineari-elongata, subulato-acuminatissima, membranacea, rubro-marginata, superne convoluta, supra glaberrima, subtus tomento arachnoideo deinde evanescente vestita, scapum dense arachnoideo-pulverulentum superantia; spica densa, tota cinnabarina, arachnoideo-puberula, apice leviter incurva; flores patuli, bracteis minoribus fulcrati, breviter pedicellati; sepala ovato-lanceolata, concava.

54. PITCAIRNIA INERMIS Mey. (in reliqu. Haenk. II. 123. tab. 23). — Koch l. c.

Folia elongata, linearia, valde acuminata, glaberrima, scapum aequantia; spica composita, thyrsoidea, ramis erectis racemosis; sepala lanceolata, carinata; petala angustissima.

55. PITCAIRNIA MUSCOSA Mart. (in R. et S. syst. veget. VII. 2. p. 1240. bot. magr. tab. 4770; *P. leiolema* hort. van H.; *P. Beycalema* hort. Schönbr. in Beer Bromel. p. 63). — Koch l. c.

Caespitosa; folia brevia, lineari-lanceolata, patenti-vix recurvata, plana, supra glabra aut basi raro furfure instructa, subtus albido-furfuracea, scapum floccoso-furfuraceum subaequantia; spica simplex, parce tomentosa, densiuscula; bracteae pedicellos erectos breves superantes; sepala lanceolata; petala subringentia.

In Brasilia indigena, probabiliter in prov. Minas Geraes. — Species omnium minima, aliena.

56. PITCAIRNIA PUNICEA Lindl. (in Hassk. Retzia II, p. 12; Beer Bromel. p. 56.) — Koch l. c.

Pluricaulis, caespitosa; caules breviores, cicatrisati; folia brevia, lineari-lanceolata, submembranacea, aculeis minutis sursum hamatis armata, supra glabra, subtus albido-furfuracea, scapum floccoso-furfuraceum subaequantia aut eo breviora; spica simplex, laxiuscula, parce tomentosa; pedicelli patentes, bracteis griseis accumbentibus longiores; sepala triangulari-lanceolata; flores majusculi, erecti, subringentes; petala amoene rubra, ad basin squamula plerumque adnata praedita.

Species quoad habitum aliena, forsan e sectione rejicienda; ovula oblonga et obtusa, nec attenuata et appendiculata.

57. PITCAIRNIA LAEVIS Beer (Bromel. p. 60; *Tillandsia* Fl. Flum. III, t. 126). — Koch l. c.

Caulis cicatrisatus, brevis; folia elongata, basi canaliculata, ceterum lineari-lanceolata, subdisticha, scapum floccoso-furfuraceum aequantia aut superantia; bracteae breves; spica densiuscula, flores patentissimi, subringentes.

VI. COCHLIOPETALUM.

Folia turionum brevissima, reliqua elongata, angusta, carnosula, plerumque isomorpha, omnia integerrima; racemus simplex aut panicula; bracteae lanceolatae breves; flores albidi, raro rubicundi, pedicello longiori patentissimo insidentes; petala plerumque apice revoluta, basi nuda.

58. PITCAIRNIA STAMINEA Lodd. (bot. cab. tab. 775, bot. mag. tab. 2411; *Cochliopetalum stamineum* Beer Bromel. p. 70). — Koch l. c.

Folia patula, denique recurvata, angusta, longe acuminata, supra intense viridia, subtus parce albido-furfuracea, basi furfuraceo-lacera; racemus glaberrimus, pyramidalis; bracteae pedicellis duplo triplove breviores; petala laete coccinea, apice revoluta; stamina longe exserta.

P. speciosa rubra et sp. ex horto Turicensi vix differunt foliis longioribus, magis erectis, rigidioribus.

59. PITCAIRNIA ALBIFLOS Herb. (in bot. mag. tab. 2642; *P. albiflora* Spreng. syst. veget. IV. 2. p. 131; *Cochliopetalum albiflos* Beer Bromel. p. 68). — Koch l. c.

Saepe caulescens; folia erecta, denique recurvata, angusta, longe acuminata, supra et subtus glaberrima; racemus glaberrimus, pyramidalis; bracteae pedicellis subhorizontalibus duplo breviores; petala albido-flavescentia, apice revoluta, staminibus breviora.

60. PITCAIRNIA ODORATA hort. Angl. (in Reg. Gartenfl. III. tab. 11. Tillandsia Schüchii Fenzl in O. et Dietr. allg. Gartenz. XIV. p. 266; Cochliopetalum Schüchii Beer Bromel. p. 69). — Koch l. c.

Saepe caulescens; folia erecta, denique minus recurvata, angusta, longe acuminata, supra et subtus pallide viridia; racemus laxus, glaber-

rimus; bracteae pedicellis breviores; petala albida, apice revoluta, stamina superantia.

P. flavescens Beer (Bromel. p. 69) staminibus petalis brevioribus a P. odorata hort. Angl. non satis diversa videtur, in descriptione autoris incompleta petala in-, nec revoluta, flavescentia dicuntur.

61. PITCAIRNIA MICRANTHA Lindl. (in bot. reg. XXIX. misc. p. 44). — Koch l. c.

Folia flaccida, latiuscula, margine undulata, patenti-recurvata, basi subtus pubescentia, supra intense, subtus pallide viridia; scapus parce floccosus; spica composita; pedicelli breves, bractea brunnescente ovato-lanceolata paene omnino inclusi; petala brevia, sepala tantummodo duplo superantia, recurvata.

Habitu magis ad species maidifolias accedere videtur, sed ob petala recurvata cum P. odorata, albiflora etc. convenit.

62. PITCAIRNIA ELATA Liebm. (ind sem. hort. Haun. a. 1849. p. 14). — Koch l. c.

Folia late linearia, graminea, leviter canaliculata, glabra: racemus laxus, glanduloso-pubescens; flores longe pedicellati, patentissimi, albi; sepala lineari-lanceolata, a petalis lineari-spathulatis obliquis triplo superata; stamina petalis parum breviora.

Species ob petala obliqua forsan sectioni maidifoliarum adnumeranda.

63. PITCAIRNIA RINGENS Regel. — Regel Reg. Flora 1853. p. 450. — P. radicalib. longe linearib. integerrimis glabris; racemo simplici laxo; scapo foliis caulinis bracteisque tomento laxo, bract. lanceolatis pedunculos duplo superantibus; petalis b. nudis calyceque coloratis.

NIDULARIUM *Lem.*

Jard. fl. IV. misc. p. 60. adnot. et tab. 411.

Perigonii superi laciniae exter. prope basin connatae dein liberae erectae rigidissimae, inter. in tubum fere duplo longiorem omnino connatae, ap. liberae erectae cucullatae b. intus penitus nudae. Filamenta cum tubo longitudine tota connata sed perspicua ap. tantum libera, antheris linearibus ap. acutis b. subemarginatis dorsifixis, stigmatib. 3 planis membranaceis spirali-convolutis. Ovar. omnino inferum trigonum triloculare; ovula numerosissima placentis 2 angulo centrali affixis adhaerentia ... Caps. baccata?

Guzmannia picta Lem. ol. ms. et in hort. Cat. — Adde: Seminibus ... ap. exappendiculatis. — Scapo nullo ... bracteis quincuncialibus solitariis ... bracteola unica. Floratio centrifuga.

1. NIDULARIUM FULGENS Lem. l. c. — Unica adhuc generis species. — Cl. Regel ann. 1857 duas adhuc species publicavit.

2. NIDULARIA SCHEREMETIEWII Rgl. — Reg. Ind. sem. h. bot. Petrop. 1857.

Glabrum, caule humili dense folioso, foliis patentibus, apice recurvis, elongatis, lineari-lanceolatis, attenuato-acutissimis, glabris spinuloso-serrulatis, basi latiore integerrima caulem amplectentibus; foliis floralibus multo brevioribus, coloratis; calycibus viridibus trigonis ad ovarium usque trifidis; laciniis rigidis, erectis, convoluto-appressis acutis.

Caulis 1/2—3/4 pedem altus. Folia inferiora laete viridia, sub lente impresso-punctata, 1 1/2 ped. longa, pollicem lata. Flores corymboso subsessiles, in apice caulis axillares et terminales, corymbis lateralibus 4 floris. Folia floralia flores multo superantia et foliis inferioribus multa breviora 2—5 poll. longa, e basi latiore integerrima elongato lanceolata, totidem purpurea v. apice tantum viridia, v. viridi-variegata. Calyx trigonus; parte inferiore tubulosa germini totidem adnata; parte superiore erecta, ad ovarium usque tripartita, pollicem v. 1 1/2 poll. longa; basi bractea unica v. rarius

duabus oppositis involucratus. — Corolla supera, gamopetala, calycem multo superans, 1½ poll. longa; limbo erecto, trifido, caeruleo; tubo albo; laciniis apice cucullato-concavis, obtusis. Filamenta 6, corollae tubo ad limbum usque adnata, 3 limbi laciniis opposita, 3 iis alterna; antherae lineares, dorso affixae, basi breviter sagittatae. Stigma conicum, capitatum. — Patria Brasilia? — Caraguata serrata H. Petrop. et Rgl. Ind. sem. hort. Petrop. ann. 56. p. 17. (Rgl.)

3. NIDULARIUM PURPUREUM Beer. Die Familie der Bromeliaceen p. 78.

Caule humili dense folioso; foliis erecto patentibus, apice recurvis, lineari-lanceolatis, attenuato-acutis, obscure purpureis squamis albidis lepidotis vestitis, spinuloso-serrulatis, basi latiore integerrima amplexicaulibus, foliis floralibus multo brevioribus, concoloribus; calycibus trigonis, limbo erecto, ad ovarium usque tripartito, rubro, lobis ovato-lanceolatis, acutissimis, convoluto-appressis.

Folia usque 1½ pedes longa, 1½ poll. lata. Corolla superne carminea. Cetera ut praecedentis. Planta, quam cl. Beer descripsit, differt foliis nitidis glabris, serrulatis (nec mucronato-serrulatis). — Pitcairnia discolor H. Petrop. (Rgl.)

NEUMANNIA *Brongn.*

1. NEUMANNIA PETIOLATA C. K. et Bouch. — Ind. sem. h. Berol. 1856.

Folia longissima, omnia aut inferiora in petiolum attenuata canaliculatum, margine ciliato-spinescentem, glaberrima; spica elongata, novemfaria, scapum breviorem, lanugine detersibili, griseo-albo vestitum terminans; bracteae virescenti-brunneae, flores fere omnino tegentes.

Scapus cum spica subtripedalis, foliis bracteiformibus adpressis obsitus; bracteae lanceolatae, 2 poll. longae, basi paene pollicem latae. Folia quadripedalia, ad superiorem partem lanceolata, medio 2 poll. lata, utrinque viridia. Flores elongati, vix e bracteis emergentes; sepala petalis dimidio breviora, oblongo-lanceolata, 8—9 lin. longa, 4 lin. lata, enervia, alba, margine extremo rubescentia. Petala lanceolato-linearia, viridi-flavescentia, postremo flava, basi intus lamellula ovata tenuiter membranacea, 4 lin. longa instructa. Stamina 6 aequilonga, filamentis filiformibus, poll. longis; germen triplex, ovatum, sulcis tribus longitudinalibus praeditum, 4 lin. longum, basi 3 lin. latum; stylus elongatus, trigonus, filiformi-columnaris, petalis paululum brevior, dimidio superiore tarde spiralis, stigmatibus tribus spiraliter convolutis; ovula appendicibus triplo quadruplove longioribus praedita. — Foliis longissimis, petiolo paene pedali instructis distincta, ad N. sulphuream (Puyam) Hook., ut videtur, maxime accedens. Haec differt foliis elongatis quidem, attamen brevioribus et ad basin inermibus, caule lanugine non vestito, flore altius eminente atque lamellula ad basin petalorum bipartita. — Cl. de Warszewicz e Guatemala in hortum botanicum attulit. — Neumanniae genus a cl. Brongniarto conditum, cui cl. Beer nomen Phlomostachyos (profecto magis significans) substituit, valde naturale apparet, tamen discrimina primaria: ovula appendicibus longis praedita, inflorescentia densissima spiciformis et bracteae magis coriaceae, relativa esse videntur. Pitcairniam Altensteinii et species affines autem, quae ovulis brevioribus appendicibus, quam in genuinis Pitcairniae speciebus, instructis gaudent, ad Neumanniam non ducendae, etsi cl. Beer eas in genere Phlomostachyos enumeravit. Propter bracteas magis membranaceas et inflorescentiam breviorem affiniores sunt Pitcairniae bracteatae Ait. Cur autem cl. Lemaire (Jard. fleur. Tom. II, ad tab. 127) e Pitcairnia Altensteinii Scheidw. novum genus, Lamproconum, formaverit, e brevi generis diagnosi minime perspicitur.

2. NEUMANNIA OCHROLEUCA C. K. et Bouché l. c.

Puya sulphurea Hort. Herrenh. et hort. bot. Berol.

Folia medio latiora, ad basin et apicem attenuata, integerrima, supra

et scapus, lanugine flocoso detersibili vestita, subtus glabra; spica septemfaria, scapum longitudine aequans; bracteae virescenti-brunneae, apice lanceolato, patulo, viridi; petala basi nuda.

Scapus inferne foliis lanceolatis et reflexis, superne foliis bracteiformibus, erectis, adpressis plane vestitus; folia inferiora paene tripedalia, ad basin attenuata, amplectentia, medio 1½—2 poll. lata; bracteae oblongo-lanceolatae, supra basin 7—9 lin. latae, pollicem et dimidium longae. Flores bipollicares, flavescentes; calyx triqueter, albescens, apice virescens, sepalis lanceolato-oblongis, poll. longis; petala linearia, sed ad partem supremam laminam referentem latiora; stamina 6 aequilonga, filamentis filiformibus, a petalis longitudine parte sexta superata; germen pyramidale, sensim in stylum trigonum petala superans attenuata, 5 lin. longum, basi 2½ lin. latum; capitulum stigmatum pentacyclum; ovula subsessilia, apice appendice filiformi paene duplo longiore, curvatulo instructa. — Ex horto Herrenhusiano sub nomine Puyae sulphureae accepimus, quo sub nomine species duae inter se diversae distributae esse videntur, quarum altera a cl. Hookero in diario anglico „botanical magazine" ad tab. 4696 sub hoc nomine descripta et depicta est, altera Neumanniam ochroleucam nostra sistit. Hookeriana quoque nullo modo ad Puyam, sed ad Neumanniam referenda et sequenti modo distinguenda est:

3. NEUMANNIA SULPHUREA C. Koch (*Puya sulphurea* Hook., *Phlomostachys sulphurea* Beer).

Folia a medio ad basin et apicem attenuata, integerrima, glaberrima; spica septemfaria(?), scapum subaequilongum nudum terminans; bracteae virescenti-brunneae, apice lanceolato, patulo, viridi; petala basi squamigera.

N. ochroleuca et sulphurea conveniunt et a reliquis speciebus facillime distinguuntur foliis basi attenuatis quidem, sed nequaquam petiolo margine ciliato-spinescente et canaliculato praeditis. — Conf. infra Puyam sulphuream Hook. — De ceteris Neumanniae speciebus, quatenus materies in horto botanico nostro suppeditatur, sequentes enumerandae sunt:

4. NEUMANNIA MAIDIFOLIA C. Koch (*Pitcairnia maidifolia* Pl. et Lindl. fl. des serr. IX. p. 151. *Puya maidifolia* Pl. et Lindl. in fl. de serr. IX. tab. 915, *Phlomostachys densiflora* Beer Bromel. 46).

Folia medio lata, elongata, disticha, glaberrima; spica quinquefaria, scapum breviorem, nudum terminans; bracteae brunneo-rubrae, apice erecto; petala basi squamigera.

5. NEUMANNIA IMBRICATA Brongn. in ann. d. sc. nat. 2. ser. XV. p. 369 (*Pitcairnia imbricata* Brongn. in hort., *Phlomostachys imbricata* Beer Bromel. 47).

Folia elongata, margine ciliato-spinescente, glaberrima; spica quinquefaria, scapum nudum aequilongum aut longiorem terminans; bracteae virescentes; petala basi nuda. — Foliis margine ciliato-spinescentibus, sed non in petiolum canaliculatum attenuatis et bracteis virescentibus haud aegre a speciebus affinibus discernenda est. Praeterea reliquis multo minor.

Quod ad ceteras species, quas cl. Beer ad Phlomostachyn attulit, pertinet, de Phlomost. Altensteinii jam dixi. In diario „Jardin fleuriste" a cl. Lemaireo edito supra allato loco hujus speciei varietas altior memoratur, quae in diario „Flore des serres Tom. III. tab. 253 et 254" nomine Puyae Altensteinii β. giganteae descripta et depicta, et a cl. Alb. Dietrich nomine Puyae macrostachyae separata est. Eadem a cl. Lemaireo denique nomen Lamproconi gigantei accepit. — Pitcairnia densiflora Brongn. (Lem. hortic. univ. VI. p. 228 c. ic.), quam cl. Beer male cum N. imbricata Brongn. conjunxit, propius accedit ad P. Altensteinii, differt tamen bracteis viridibus et floribus aurantiacis, quam ob rem in hortis etiam nomine Puyae s. Pitcairniae aurantiacae colitur. — Phlomostachys gigantea Beer (Brom. p. 47), Neumannia gigantea Brongn. hort. Paris., mihi plane ignota. E descriptione differt a reliquis speciebus

scapo 7-pedali et bracteis rubro-brunneis. — Phlomostachys atrorubens Beer (Brom. p. 48) a cl. Warszewiczio in Europam allata, nunc Vindobonae culta, e Beerii verbis discrepat: bracteis intense rubris, apice nigris, patulis, nec non inflorescentia centrifuga, quae in omnibus reliquis Bromeliaceis centripeta est. — Phlomostachys Funkiana Beer (Brom. p. 47) denique vera Pitcairnia est, qualem jam cl. Alb. Dietrich (allgem. Gartenz. XIX. p. 337) definivit, deinde etiam c. Regel in diario suo „Gartenflora" Tom. III. ad tab. 113 depinxit. Pitcairnia macrocalyx Hook. bot. mag. t. 4705 et Beer (Bromel. p. 52) ab hac nullo modo differt.

1306. TILLANDSIA *Linn.*

(Walp. Ann. III. 622.)

1. TILLANDSIA IONANTHA V. Houtte. — Fl. d. serres X. tab. 1006.

Caule abbreviato, b. succuloso erecto, f. imbricatis patenti-erectis late linearibus sursum sensim attenuatis acutis crassis furfuraceis supremis roseo-Kermesinis bracteaeformibus flores parum superantibus, fl. paucis (sessilibus?) immersis, corollae amoene violaceae laciniis elongatis in tubum convolutis, staminibus brevit. stylo longiuscule exsertis.

(Descr. ex ic.)

T. ionanthe Planch. in hort. V. Houtt.

Hab. Brasilia?

2. TILLANDSIA PROPINQUA (§ flores solitarii). — Gay fl. Chilena VI. p. 15.

Caespitosa; f. subdistichis, lin-subulatis, b. dilatatis, canaliculatis-argenteo-lepidoto-pruinosis recurvo-patentib., pedunculo 1-floro brevioril, aut rar. longiorib.; bract. 3 inaequalib., acuminatis.

Spec. valde aff. T. recurvatae, T. virescenti et T. capillari; crescit supra arbores prov. del Norte.

3. TILLANDSIA DIANTHOIDEA Ross. — Regel Gartenfl. III. p. 140. tab. 85.

1306½. VRIESEA *Gaud.*

(Walp. Ann. III. 622.)

Icones addendae.

VRIESEA SPECIOSA Hook. — (Walp. Ann. III. 622. n. 1). — Gardn. mag. of bot. II. p. 217. tab. 19.

VRIESEA PSITTACINA Lindl. — Decaisne, revue hort. Paris. 1855 p. 241.

1307. CARAGUATA *Plum.*

(Walp. Ann. I. 840.)

1. CARAGUATA Plum. (Walp. Ann. I. 840). — Morren, Fuchsia, Bruxelles 1849 p. 48. c. tab. fig. 1—10. — Bulletin de l'acad. roy. de Belgique. — (E voce vernaculari americana Aloës sonante).

Perigonii liberi sexpartiti laciniae exteriores calycinae, aequales, persistentes, b. cohaerentes, erectae, interiores petaloideae in tubum ap. breviter trilobum connatae b. intus nudae. Stam. 6, perigonii interioris tubo adnata, ap. filamentor. brevi libero, antherae erectiusculae, b. sagittato emarginatae. Ovar. liberum, triloculare. Ovula in loculorum angulo centrali pr. basin plura, biseriata, adscendentia, anatropa. Stylus filiformis, stigmata tria, brevia obtusa erecta. Caps. cartilaginea oblonga, trilocularis, loculicido-trivalvis, valvis planis, solutis basi tantisper tortis, endocarpio nigro-nitido cohaerente. Sem. plurima e b. dissipimentorum erecta pilis papposis b. cincta, stipitata, lineari-clavata, testa membranacea, tenuissima, chalazza terminali mamillari-acuta,

embryo in b. albuminis farinosi rectus, quasi cum et in albumine coalitus, extremitate radiculari infera.

2. CARAGUATA LINGULATA Lindl. (Walp. l. c.) Morren l. c. c. tab.

1308. GUZMANNIA *Rz. et Pav.*

(Walp. Ann. I. 840.)*

Icon addenda.

GUZMANNIA TRICOLOR Rz. et Pav. (Walp. Ann. I. 840). — Fl. des serres IX. tab. 918.

1312. DYCKIA *Schulte f.*

1. DYCKIA PRINCEPS Ch. Lem. — Lem. jard. fl. Ill. tab. 224—25. — Caudice subnullo crassissimo, foliis extrema b. latissima dilatato-amplexantib. spirali-congestis non gibbosis sensim longissime acuminatis crassis rigidissimo-fragilib. patenti-recurvatis distanter dentato-aculeatis ap. brevi pugioniformib. supra glabris subtus pannose reticulato-squamosis, scapo altissimo erecto ramoso? (rarius simplice?) robusto b. maxime folioso dein bracteato lanugine ferruginea (sicut et cal. et bract.) vestito, florib. succulento-cereis spicatis, infer. et ramorum pedicellatis, super. sessilibus, (in spec. vivo observato; scapo simplici, fl. omnib. sessilibus), calycinis laciniis ovatis, dorso convexis ciliato-pilosis subviscosis dorso convexis b. extrema connatis, in fl. sess. secus scapum sursum calcarato-gibbosis, petalis rotundatis paulo longioribus expansis, antheris lin-oblongis recurvatis, connectivo subpedicellato late ovato, stylo brevissimo ovario trigono continuo, stigmatib. capitato-fimbriatis. — An Dyckia altissima Lindl. misc. bot. Reg. n. 183, cuj. nulla descriptio.

1314. PUYA *Molina.*

(Walp. Ann. III. 623.)

1. PUYA SULPHUREA Hook. — Hook. bot. mag. 1853. tab. 4696.

Acaulis, f. inermib. lin-lanc. tenui-acuminat. obscure nervosis b. angustatis canaliculatis, spica solitaria pedunculata (una c. pedunc. folia subsuperantib.) strobiliformi ap. acuminata, bracteis inferiorib. foliac., superiorib. (floriferis) ovatis anguste acuminatis erectis concavis dense imbricatis purpureo-rufis ap. viridib., fl. sessilib. sulphureis longe exsertis, petalis squama bifida prope basin, staminib. subinclusis.

P. sulphurea Hort. Hernhausen. — Confer supra Neumanniam n. 1 et 2.

Patria adhuc ignota.

2. PUYA CHILENSIS Molina (Walp. Ann. I. 841. n. 3.) — Hook. bot. mag. 1858 tab. 4715. — Lem. jard. fl. IV. tab. 392. — Fl. d. serres IX. tab. 869—870. (ic. ex Hook. iterata).

Caule elato erecto crasso cicatricoso parce ramoso, ramis crassis tortuoso deflexis, f. 3—4 pedalib. e b. dilatata elong-ensiformib. rigidis glaucescentib. subt. minute albo-furfurac. canaliculatis sensim acuminatissimis grosse spinosis, spinis subulatis uncinatis, pedunculo terminali elongato-columnari bracteato, spica ampla composita multibracteata multifl., bract. pubesc-hirsutis, fl. plerisq. sessilib., sep. trib. lanceolatis, pet. flavis calyce 4-plo majorib. oblongo-ovatis acutis erecto-patentib., staminib. pistilloq. corolla breviorib.

Puya suberosa, Molina hist. Chil. p. 153. — *Pitcairnia coarctata*, Pers. syn. pl. I. 344. — *Renealmia ramosa* lutea, Feuill. III, p. 59. tab. 39.

Patria, Chili borealis. — Caudex 4 ped. altus, flexuosus 12 poll. in circuitu. F. fasciculata in ap. caudicis v. ejusdem ramorum 2—3, rarius 4 ped., radiantia, infima recurvata etc. — *Confer* num. sequentem.

3. PUYA COARCTATA Gay. — Gay fl. Chilena VI. p. 11. — Sertum Petrop. 1852 tab. 18?

Arborescens; f. ensiformib., aculeatis glabris; spica terminali, pyramidata, composita, coarctata; perigonio externo tomentoso.

P. suberosa Molina. — *Pourretia coarctata* Ruiz. et Pav. (Walp. Ann. I. 841. n. 1): Gaud. voy. de la Bonite fig. 40—41. — *Renealmia* Feuillé.

Planta vulgaris en los lugares secos provinc. centr. — Cum specie praecedenti synonymon.

4. PUYA ALPESTRIS Gay. — Gay fl. Chilena VI. p. 12. — Pourretia alp. Poepp. nov. gen. et sp. pl. tab. II. tab. 156.

5. PUYA COERULEA, Gay l. c.

Fol. linearib. acuminatissimis, spinoso-dentatis, glabriusculis, scapo paniculato; fl. pedicellatis, bract. oblongis, concavis, membranac., acuminatis, longiorib.; petal. plumbeo-coeruleis, obtusis sepal. multo longioribus.

P. coerulea, Miers. — Lindl. bot. reg. 1840. tab. II.

A cl. Miers in provinc. Santiago detecta, et in hort. Bot. Britannicis culta.

Icones addendae.

PUYA LONGIFOLIA Morr. — Walp. Ann. I. p. 840. n. 1. — Paxton fl. gard. III. p. 65. pl. 86.

PUYA COARCTATA Fisch. (Gay?) — Sertum Petrop 1852. tab. 18.

Ordo XXI. HAEMODORACEAE *R. Br.*

(Walp. Ann. III. 842.)

1253. HAEMODORUM *Smith.*

(Walp. Ann. III. 842.)

1. HAEMODORUM DISTICHOPHYLLUM Hook. — Hook. Ic. pl. ser. nov. V. tab. 866. (Gunnianae).

Humile, glabrum, totum siccitate atro-sanguineum coriac., subacaule, f. exacte distichis arcte equitantib. ensiformi-subulatis superne canaliculatis scapo breviorib. dimidio inferiore vaginantib. membranaceis, scapo bracteato, bracteis longe vaginantib. inflatis, corymbo solitario capitato, pedicellis bracteolatis, ovario trilobo supero.

Hab.: Planta rara, in collibus prope portum Macquarie, Van Diemens Land. — Gunn (n. 2055.)

1258. CONOSTYLIS *R. Br.*

(Walp. Ann. III. 842.)

Icon addenda.

CONOSTYLIS VAGINATA Endl. — Hook. ic. pl. ser. nov. V. tab. 853. (Drummondianae) — Walp. Ann. I. p. 844. n. 20. — (Ad tribum Conostylis junceae, Endl. collocanda.)

1257. ANIGOZANTHUS *Labill.*

(Walp. Ann. III. 842.)

1. ANIGOZANTHUS TYRIANTHINA W. J. Hook. — Bot. mag. tab. 4507.

Caule elato terete dichotome paniculato superne purpureo cano-tomentoso, foliis plerisq. radicalibus lin-acuminatis rigidis striatis rectis glaberrimis marginibus serrulato-scaberrimis, spicis paniculatis secundifloris bracteolatis, pedunculis pedicellis perianthiisque externe tomento denso tyrianthino tectis, perianthii (intus glabriusculi straminei) laciniis lanc-acuminatis tubo curvato brevioribus, staminum filamentis laciniis brevioribus, antheris exappendiculatis.

Lem. jard. fl. I. tab. 40. — Detexit el. Drummond in regione austro-occidentali fluminis Swan river.

1261. BARBACENIA *Vandelli.*

(Walp. Ann. III. 845.)

1. BARBACENIA SCHIDIGERA Lem. — Lem. jard. fl. II. tab. 198—199. — Caudice (in solo natali) longissimo subramoso, f. confertissimis arctissime spiratim involutis integre persistentibus undique vestito, junioribus late linearibus acuminatissimis, sp. cito siccante tortili, laete viridibus subalbido velutinis ciliatis delicatissime striato-costatis medio subcanaliculatis; pedunculo foliis breviore hirsuto, perigonio elongato eglanduloso subhirsuto ut folia costato recto viridi-flavo, laciniis late linearibus aequalib. reflexis obtusis miniatis, interiorib. latioribus, antheris lin-oblongis squamas bifidas superantibus prae revolutione laciniarum exsertis, stylo robusto longiore, stigmate ... (ex uno flore vivente sed jam siccante et ex uno specimine sicco).

2. BARBACENIA MACRANTHA Lem. — Lem. jard. fl. IV. tab. 390. (II. misc. p. 97.) — F. trifariis patulis oblique versis ap. longe acuminato tortis et jam siccantibus, undique (sicut et tota planta) pube tenui velutinis margine ciliatis extus carinatis intra in angulum canaliculatis; amite (?) laterali brevissimo (plus minus?) bracteis siccis longis subulatis tortuosis suffulto; ovario subtrigono obpyramidato; tubo perianthii late infundibuliformi striato subcompresso, limbo rotatim patulo, laciniis amplis ovatis mucronato-acutis dorso carinatis, ad faucem androzona crassa rugosa cum tubo connata sexfida, segmentis brevissimis emarginatis, unoquoque antheram longe linearem sessilem dorsifixam gestante; stylo trigono, b. dilatata secus et intra loculos decurrente vix androzonam attingente ad ap. versus in stigma capitatim trigonum sensim attenuato. — Patria: Brasilia prov. Minas Geraes prope Vellozia.

Icon addenda.

BARBACENIA ROGIERII hort. Belg. (hybr.) — Mag. of bot. I. p. 209. tab. 22. — Lem. jard. fl. I. tab. 82.

Ordo XXII. HYPOXIDEAE *R. Br.*

(Walp. Ann. III. 846.)

MACROPIDIA *J. Drum.*

Harvey, new genera of W. Austral. plants, in Kew. gard. misc. VII. 57.

Perigonium corollinum, lanatum, tubo b. cum ovario connato elongato ore obliquo (tand. deciduum?); limbi 6-fidi laciniis patentib. adscendentib. Stam. 6, fauci perig. inserta, exserta; filam. adscendentia; anth. adnatae longit. dehisc. Ovar. triloc.; ovula in loculis solitaria! peltata. Columna maxima triloba. Stylus filiformis. Caps. loculicide trivalvis.

Herba perennis, habitu omnino Anigosanthi; diff. tamen ovulis solitariis.

1. MACROPIDIA FUMOSA J. Drum. l. c. — In regionib. septembr. Australiae occid. (Kangoroo's foot, Col.)

1263. CURCULIGO *Gärtn.*

Icones addendae.

CURCULIGO SUMATRANA Roxb. Loddiges. — Wight Ic. tab. 2042.
CURCULIGO MALABARICA R. W. — W. Ic. tab. 2043. 1.
CURCULIGO BREVIFOLIA ? Ait. hort. Kew. — W. Ic. tab. 2043. 2.

1264. HYPOXIS *Linn.*

1. HYPOXIS ROOPERII Moore. — Gardn. compan. (1852) p. 65. tab. l. c. fig. 1.

Pilosa, f. trifariis, recurvatis, elongatis, acute carinatis b. angustatis et imbricatis, in longum acumen desinentib., supra pilis sparsis stellatis vestitis, subtus lanatis, scapo 4—6 fl., foliis multo breviore, simulque cum bracteis et perianthio exteriori, pilis longis obsito, pedicellis perianthium aequantib., bracteas membranaceas carinatas superantibus.

Lem. jard. fl. tab. 303. — Planta a Captain Rooper ad ostium fluminis Buffalo in Caffraria detecta et in hortos 1848 introducta.

2. HYPOXIS LATIFOLIA Hook. — Hook. bot. mag. 1854. tab. 4817.

Tubere globoso solitario, f. lato lanc. acuminatis glabr. b. vaginatis dem. interiorib. longissimis, racemis plurifloris, bract. ciliatis, ovario turbinato.

Patria: Natal. — Tuber bulbiforme, magnitudine formaque Rapae, rotundatum, obscure concentrice striatum. Folia interna usque 2 pedalia etc.

Icones addendae.

HYPOXIS STELLATA L. fil. (Pers.) — Fl. d. serres X. tab. 1027. — (Amaryllis Capensis L. sp. pl. 420).
HYPOXIS LEPTOSTACHYA R. W. — Wight Ic. tab. 2045. 1.
HYPOXIS TRICHOCARPA R. W. — Wight Ic. tab. 2045. 2.
HYPOXIS PAUCIFLORA R. W. — W. Ic. tab. 2046. 1. — (Curculigo pauciflora ? Moon)
HYPOXIS BRACHYSTACHYA R. W. — W. Ic. tab. 2046. 2.

Subclassis VII. CORONARIAE Linn.

(Walp. Ann. III. 626.)

Ordo XXIII. PONTEDERIACEAE *A. Rich.*

(Knth. en. IV. 118. — Walp. Ann. III. 626.)

LIMNOSTACHYS *F. Mueller.*

Fragm. phytogr. 1858. p. 24.

Calyx persistens corollinus patens aequaliter 6-partitus, laciniis lanceolatis. Stamina 6, calycis lobis opposita aequalia. Filamenta linearia basi inter se et cum fundo calycis concreta, unilateraliter supra stylum conniventia. Antherae biloculares basifixae hastato-oblongae truncatae, loculis longitudinaliter introrsum dehiscentibus et apice hiantibus. Germen triloculare multigemmulatum. Gemmulae placentis centralibus axin septorum marginantibus ope funiculi brevis affixae in loculis biseriatae. Stylus cylindraceus vix decurvus. Stigma trilobulatum. Capsula libera, calyce persistente inclusa, trilocularis, demum loculicide trivalvata polysperma. Semina ovata tenuissime longitudinaliter costulata. Testa membraneo-chartacea. Umbilicus basalis. Chalaza crassiuscula terminalis. Embryon in axi albuminis subfarinosi rectum ejusdem longitudine, radicula crassiuscula hilo proxima.

Herba pulcherrima Australiae borealis paludicola, foliis cordato-ovatis acuminatis, radicalibus longe petiolatis, caulino singulo racemum ebracteolatum suffulciente, petiolis vaginantibus, floribus cyaneis. — Genus Eichhorniae et Monochoriae finitimum.

1. LIMNOSTACHYS CYANEA. — In terra Arnhem's Land. Leichhardt. Ad flumen Victoriae. — Rhizoma saepe repens fibras crebras agens. Caulis sesquipedalis v. humilior teretiusculus. Petioli inferne teretes, superne biangulati, caulinus folio brevior. Folia 1½—3" longa. Racemi floriferi erecti, fructiferi reclinati v. nutantes. Pedunculi crassi angulati pluri-multiflori semipedales v. breviores. Pedicelli cum flore articulati 2''' longi crassi. Calycis laciniae fere pollicem longae, exteriores dorso virentes v. albidae, margine intusque, interiores autem undique cyaneae. Filamenta cyanea circiter 3''' longa. Antherae aureae 1''' vix longiores. Stylus coeruleus fere filamentorum longitudine. Capsula semuncialis. Semina nitidulo-fusca ⅓''' longa.

IV. MONOCHORIA *Presl.*

(Knth. en. IV. 132.)

1. MONOCHORIA JUNGHUHNIANA Hassk. — Hasskarl in Regensb. Fl. (1852) p. 116.

Erecta pusilla, foliis lanceolatis, b. nunc subcordatis, racemis pedunculatis 1—3 floris, petiolo foliis floralib. longiori.

Cfr. l. c. pl. descr. ampiam. — Hab. in pratis udis ins. Sumatrae pr. Samas ad ostium fluminis Opak.

Ordo XXIV. LILIACEAE *Juss.*

(Walp. Ann. III. 626. — Knth. en. pl. IV. 215.)

Griffith notulae (1851) tab. 276—278.

SANDERSONIA gen. n. *Hook.*

Hook. bot. mag. 1853. tab. 4716.

Perianth. corollin. tubuloso-campanulatum, subglobosum, ore brevit. 6-fido; b. nectarifera et in cornub. c. calcarib. 6 brevib. incurvis extensa. Stam. 6 hypog., perianthio omnino inclusa. Filam. subulato-filiformia. Anth. oblongae, filamentorum longitud. aequantes, oblongo-obtusae, dorso paulo infra med. insertae, versatiles, inversae biloculares. Ovar. liber. oblongo-ovale, longitud. trisulcatum, trigonum, trilocul.; loc. pluriovulatis; ovul. obovatis biseriatim angulo interiori s. axili longitudinaliter insertis. Fr....

Herba Natalensis Africae australis, erecta, simplex, radice tuberosa, caule tereti. F. erecta, alterna, sessilia, lanc., anguste acuminata, striata subdisticha v. superiora subsecunda. Pedicelli axillares in fol. superiorib. solitarii, graciles, curvati, 1-fl. Fl. nutantes aurantiaci, pedunculis subbreviores.

1. SANDERSONIA AURANTIACA. — Tuber parvum parce globosum bilobatum subsemilunare, etc. — Fl. des serres IX. tab. 862. (icon ex Hook. hic iterata). — Lemaire jard. fl. IV. tab. 408.

MILLIGANIA *Hook. fil.*

Hooker in Kew. gard. misc. V. 296.

Perianth. persistens, patens, fere ad b. hemisphaericum, 6- (rar. 5—7-) partit., segment. imbricatis. Stam. 6, parva segmentis inserta; filam. brevib. subulatis; antheris intrors. versatilib. 2-loocularib., polline subglob. Ovar. oblongum, b. perianthio inmersum et eo adhaerens, 3-loc. Styli 3, discreti, subulati, recurvi; stigmata punctiformia; ovula plurima, angulo interiori affixa, ascendentia anatropa. Caps. oblong., obtusa, profunde triloba, chartaceo-membranacea, ad med. tripartibilis, loc. (stylis fissis terminatis) superne brevit. loculicide dehiscentib. Sem. plurima v. abortu pauca, ascendent., linear., curva; testa crustac., atra nitida, utrinq. subcarunculata v. ap. appendiculata; endopleura membranac.; album. carnoso; embr. tereti axillari.

Herb. elatae caespitosae Tasmnicae, facie Asteliae, sericeae v. villosae. Radix fibrosa, fibr. crassis. F. lin-ensiform., sicca coriac. Scapus panieulatus, ramos., bracteatus. Fl. pedicellati, mediocres, albi bracteolati. Capsula Anguillariae. — Genus evidenter intermedium inter Liliaceas et Melanthaceas.

1. MILLIGANIA LONGIFOLIA. — Hooker in Kew. gard. journ. misc. V. 297. — (Hook. l. c. tab. IX.)

F. elong-linearib., subgramin., b. parce villosis, panicula laxa effusa ramis gracilib. bracteis bracteolisq. membranac. linearib. lineari-lanceolatisve.

Hab. Tasmania, Franklin River et Gordons River; Milligan, 749. — Caules usque ad 2 poll. diam. ex foliis b. vaginantib. constructi. F. longiora v. scapo breviora

1—3 ped., ½—2 p. l. linearia in long. acumen gradatim attenuata, plus v. minus sericea v. villosa, basin versus et per longitudinem nervi medii. Scapus villos. 1—2 ped. supra med. ramosus. Panic. in axillis bracteata, bract. lanc. v. lin-lanc. plerumq. elong.; pedicellis gracilib. cernuis sericeo-tomentosis, bracteolis parvis lanc. v. lineari-lanc. suffultis. Fl. ⅓ p. l., albi. Perianth. integrum b. urceolatum lobis plerumque 6, lin-oblong. Stam. b. segmentum inserta. Caps. oblong. membranac. triloba, trilocularis, loculis tantum in apice medio dehiscentib. stylisque dimidiatis persistentibus coronatis.

2. MILLIGANIA DENSIFLORA. — Hooker in Kew. gard. misc. journ. V. 298.

F. coriac. patulis e b. lata vaginante gradatim angustatis acuminatis, late subulato-lanc. lin-subulatisve sparse sericeo-pilosis, scapo robusto sericeo-villoso, bract. ovato-lanc. concav., longe acuminatis infimo b. longe amplexicauli vaginante, vagina integra membranac., panicula ovata densiflora ramis ramulisque robustis.

Hab. Tasmania, in monte Sorell prope M. Quarrie Harbour. — F. coriacea 8—10 p. long. ex b. lata vaginante 1—1½ p. l. gradatim acuminata, pilis sericeis parce tecta. Scap. lanos. pil. seric. tectus, robustus, 1 v. 2 bracteis magn. ovatis concavis foliac. vaginantibus suffultus. Panic. 1—6 p. longa, rami breves bract. concav. foliaceis. — Fl. congesti, ⅓ p. diam. albi.

LITTONIA.

Hook. bot. mag. tab. 4723.

(Generis descriptio sub n. 1.)

1. LITTONIA MODESTA Hook. bot. mag. tab. 4723. — Fl. d. serres IX. tab. 859. (icon hic iterata).

Perianthium subcampanulatum hexasepalum, sepalis oblongo-acuminatis subcarinatis concavis erecto patentibus intus basi poro nectarifero utrinque squamula parva marginato. Stamina 6 hypogyna libera perianthio breviora. Fil. subulata, glabra. Anth. oblongo-sagittatae, obtusae basifixae biloculares, loculis lateraliter rima longitudinali dehiscentibus. Connectivum amplum. Ovar. ovale, longitudinaliter trisulcosum, lobis linea media longitudinali depressa notatis, 3-loculare, pluri-ovulatum, ovulis biseriatim angulo interiori loculis affixis. Stylus longitudine fere ovarii, erectus, strictus, ap. profunde trifidus lobis reflexis, stigmata obtusa, pubescentia. Fructus...

Herba scandens Natalensis. Radix tuberosa, tubere inferne bilobo, lobo unico tuber novellum proferente. Caulis caet.

Tribus I. *TULIPEAE* (Knth. IV. 216.)

I. ERYTHRONIUM *L.*

(Knth. en. IV. 216.)

1. ERYTHRONIUM DENS-CANIS Linn. (Knth. en. V. 217.) — Planchon fl. d. serres VIII. tab. 850. p. 273.

II. TULIPA *Tournef.*

(Walp. Ann. III. 626. — Knth. en. IV. 219.)

1. TULIPA MONTANA Lindl. var. *chrysantha* Boiss. et Hohen. in Kotschy pl. Pers. bor. 1846. — Boissier diagn. XIII. p. 19.

Folia curvata inferiora late linearia undulata superiora lineari-subulata. Flores non punicei sed intense citrini.

Hab. in schistosis ad radices montis Elbrus alt. 4000′—5000′. Kotschy loco citato

Nr, 78. — Petala exteriora in hac specie plus minus acuta, interiora aliquando acutiuscula aliquando obovata obtusissima. Bulbi vaginae praesertim parte superiori valde albo-lanatae.

2. TULIPA CRETICA Boiss. et Heldr. in pl. Cret. exs. 1847. — Boissier l. c.

Bulbi vaginis glabris, scapo unifloro glabro humili 2—3 phyllo foliis lanceolato-linearibus expanso-recurvis canaliculatis acutis glabris scapo plerumque longioribus superiori saepe anguste lineari, flore erecto minuto pallide roseo, perigonii phyllis oblongo-ellipticis utrinque attenuatis acutis apice minutissime puberulis interioribus basi sub lente utrinque ciliatulis caeteris glabris, filamentis tertiam partem perigonii vix aequantibus ad tertiam partem inferiorem usque parcissime ciliatulis caeterum glabris, ovario lagenaeformi antheras luteas aequanti, capsula ovato-trigona acutiuscula.

Hab. in montibus excelsis Cretae, montes Sitia, Lassiti, Ida, montes Sphaciotici (Heldr.) Fl. Aprili, Maio. — Planta 3—4 pollicaris, folia inferiora 4—5 lineas lata. Perigonii phylla 8—10 lineas longa $2^1/_2$—$3^1/_2$ lata. Affinis T. Bithynicae Grisebach pl. Turc. exs. quam cl. auctor nunc in Spicil. fl. Rum. ad T. Turcicam ducit. Haec, parviflora quoque, a nostra differt foliis angustioribus erectis, perigonii coccinei phyllis acuminatis, filamentis usque ad quintam partem inferiorem dense albo-barbatis.

3. TULIPA SOGDIANA Bge. — Bunge in Al. Lehm. reliq. bot. p. 338.

Bulbi tunicis intus villosissimis, caule diphyllo 1-floro foliis longiore glabro, foliis lin-lanc. recurvo-patentibus acutis glabris, flore nubili (mobili?) nutante, perigonii phyllis exterioribus oblongis acutis b. glabris ap. puberulis, interiorib. unguiculatis ovatis obtusis ima b. parcissime ciliolatis ap. glabris, filamentis glaberrimis basi dilatato membranaceis alternis anthera dupla longioribus.

Hab. in deserto arido inter Buchara et Kermine; m. Martio fl. caet. — Habitus *T. biflorae*; proxime affinis *T. patenti*, at distincta praeter alia filamentis glaberrimis, a speciebus staminib. glabris praeditis distincta flore minuto, perigonii phyllis interiorib. unguiculatis b. ciliolatis. — Bulbus oblongo-ovatus, caet.

4. TULIPA FRANSONIANA Parl. — Parlatore nuovi generi et spec. di pianti monocotyled. p. 15.

Gregaria, perigonii phyllis exteriorib. ovato-lanceolatis, acutis, interiorib. vix breviorib. et vix latiorib. late ellipticis, apiculatis, omnib. macula ampla obovato-rhombea, ap. insigniter unidentata, phyllisque quadruplo breviore notatis, staminib. pistillo longiorib., antheris filamento longiorib., caule laevi, foliis longiore, foliis 4—5, glaucis, canaliculatis, marg. undulatis et vix ciliolatis, bulbo ovato, ap. attenuato, prolifero.

Hab. in campis grani prope Firenze. — Species dicata illustr. Signora Marchesa Isabella Fransoni.

5. TULIPA GESNERIANA L.

var. α. *fl. purpureo*, perigonii phyllis exterioribus abrupte cuspidatis. — Bge. Al. Lehm. reliq. 6 p. 337.

Hab. in deserto trans Uralensi et ad Dongum pr. Iletzkaja Sastschita, m. Majo florens.

var. β. *flore luteo* perig. phyllis exterioribus longe acuminatis.

Hab. pr. Iletzkaja Sastschita, m. Majo flor. — Var. Dr. Horner., Gardn. mag. of bot. II. p. 305. tab. 27.

6. TULIPA LEHMANNIANA Mercklin. — Bunge l. c. p. 337.

Glaberrima glauca, caule tetraphyllo unifloro folia superante, foliis undulato-crispis circinnato-recurvis, summis linearibus, flore erecto, perigonii phyllis exterioribus oblongis acuminatis ap. subbarbatis, inte-

rioribus obovatis breviter acutatis obtusiusculis, omnibus macula pallida oblonga elongata b. pictis, filamentis glabris anthera dimidia brevioribus.

Hab. in deserto pr. Buchara, m. Martio fl. — A T. Gesneriana L. et Turcica Roth diff. praeter alia caule tetraphyllo, non triphyllo, et f. revolutis crispis, a T. Oculosolis insuper caule foliis breviore, a T. Clusiana praeter alia filamentis anthera dimidia brevioribus, a T. media Agdh. scapo foliis longiore, petalis flavis exterioribus sp. quamvis parce tamen semper barbatis; a caeteris speciebus glabritie omnium partium.

7. TULIPA PLATYSTIGMA Jord. — Jordan in adnotat à la Fl. de Fr. et d'Allem. (1855) p. 32.

Icon addenda.

TULIPA sp. — Griffith. notulae (1851) p. 241. tab. 276.

VI. GAGEA *Salisb.*

(Walp. Ann. III. 627. — Knth. en. IV. 233.)

1. GAGEA STIPITATA Mercklin. — Bunge, Al. Lehm. reliq. bot. p. 336. — G. (Sect. III. Koch. Syn. p. 824.)

Bulbo solitario solido tunicato, caule glabro dichotomo ramoso, folio radicali solitario lineari tereti solido quinquenervi, caulinis linearibus acuminatis sparsis ciliatis, floribus dichotomo paniculatis 5—7, perigonii laciniis oblongis b. attenuatis obtusis; exterioribus subbrevioribus 5—7-nerviis interioribus trinerviis, antheris elliptico-suborbiculatis, stigmate capitato, capsulae stipitatae valvis obcordatis, seminib. subcompressis.

Hab. in planitie dioritica inter Juss-Juduk et Bakali; sub finem m. Aprilis deflorata et fructificans. — Species caule multifloro dichotomo-paniculato et capsula stipitata abunde distincta. Caet.

2. GAGEA SUCCEDANEA Griseb. et Schenk. — Wiegmanns Archiv. 1852. I. p. 359.

Bulbo solitario obliquo, folio imo solitario juxta bulbum c. scapo laterali late lineari apice attenuato obtusiusculo plano, floralibus 2 suboppositis, pedunculis glabris umbellatis, perigonii segmentis lanceolatis obtusis.

Syn. *G. pratensis* var.? Heuff. pl. Banat.

Differt a G. pusilla Sch., cui bulbo solitario postumo et habitu proxime accedit: folio plano latiori juxta bulbum obliquum quasi laterali; bulbi formatione medium locum tenet inter G. luteam Sch. et G. arvensem Sch. Banatus in silvis umbrosis.

Tribus II. *LILIEAE* Knth. l. c. 245.

IX. PETILIUM *Linn.*

(Knth. en. IV. 245.)

Parlatore nuovi gen. et sp. di pianti monocot. 1854. p. 13.

1. PETILIUM IMPERIALE Jaume. — Cfr. Parlatore l. c. generis adumbrationem.

X a. TOZZETTIA *Parl.*

Parlatore nuovi gen. di piante monoc. 1854. p. 11.

(Fritillariae spec. Linn. sp. pl. 436 et auctor.)

Perig. corollinum, deciduum, campanulatum, 6-phyllum, phyllis subaequalib., interne pr. b. fovea minuta, subrotunda, nectariflua instructis, tribus exteriorib. b. externe gibbis, interiorib. interne b. cucullatis. Stam. 6, subinaeq., 3 breviora phyllis perigonii exteriorib.

respondentia, omnia virginia patentia, dein erecta et ap. patula, ima phyllorum b. inserta. Filam. filiformi-subulata. Antherae ellipticae v. oblongae, ap. obtusae, subemarginatae, b. bifidae et pro receptione filamenti breviter perforatae, secund. longitudinem lateraliter dehiscentes. Pollen lin-ellipticum utrinque acutum, laeve. Ovarium liberum sessile lineare obtuse triquetrum, faciebus planis in medio obsolete 1-costatis, 3-loculare. Ovula plura, in loculor. angulo centrali biseriata, horizontalia, anatropa. Stylus breviusculus filiformis ap. subincrassatus, rectiusculus. Stigma trilobum lobis obtusis, erectis, subpapillosis. Capsula subglobosa, ap. convexo subtruncata, 6-costata, costis sulco profundo divisis, marg. subalatis, apiculatis, trilocularis, loculicido-trivalvis, valvis medio septiferis, marg. lamelloso-ciliatis. Sem. in quoque loculo plura, biseriata, horizontalia, ovata compresso-plana, late dimidiato-obovata, hilo tenui, basilari, testa crassiuscula et nucleo latiore, marginata, undique spongioso-dilatata, rhaphe obsoleta, filiformi, ad latus rectius sita, sub testa e vertice per marginem descendente. Embryo...

Genus in honorem Dr. Ad. Targioni-Tozzetti, auctoris di organografia vegetale dicatum.

(*Tozzettia Savi* = *Alopecurus utriculatus* Linn.)

1. TOZZETTIA PERSICA Parl. l. c.

Fritillaria Persica Linn. sp. pl. 436. Knth. enum. pl. IV. p. 247.

Planta ornamentalis in hortis culta. — Hab. in Persica.

X. FRITILLARIA *Tournef.*

(Walp. Ann. III. 628. — Knth. en. IV. 246.)

Parlatore nuovi generi et spec. di pianti monoc. 1854. p. 15.

1. FRITILLARIA PYRENAICA. — L. cod. Nr. 2397. (Koch ind. sem. h. Ber. 1855). — „Infausta species, multorum sphalmatum dubiorumque mater" jam dicitur in Caroli Linnaei systemate vegetabilium cur. J. Aug. et Jul. Herm. Schultes (Vol. VII. P. 1. p. 389), quare non mirandum est, quod nemo adhuc botanicus non ignoravit, ecquid Linnaeus nomine F. pyrenaicae intelligi voluerit. Duae opiniones ab auctoribus propositae sunt, altera F. nervosam Willd., altera F. racemosam Sm. Linnaei plantam esse contendens. Qua difficultate vitata alii Linnaei nomine nihil utuntur, id quod optimum factu sit. Accedit, quod Linnaeus ipse plantam non satis cognovisse videtur, nec postremo speciem, quae tot lites evocavit, et F. nervosam W. varietates solas unius speciei haberi abnuit. Attamen si perscrutari velis, quam speciem Linnaeus nomine F. pyrenaicae amplexus sit, omnium primum Clusii historias (II, 256 et posth. 10) requirere opus est. Loco citato Clusius quam plures Fritillariae species, tum duas, nomine F. pyrenaicae et aquitanicae, descripsit. — De illa autor dixit: „quae (sepala) extimas oras nonnihil reflexas habebant; ut (flos) parvi tintinnabuli formam exprimeret, quorum terna exteriora internis erant angustiora, omnia obsoletioris coloris, circa oras tamen venis quibusdam flavescentibus distincta. A mediis foliis ad ipsos usque ungues plurimis maculis saturate purpurascentibus tessellatim dispositis notata". Ex his verbis manifeste liquet, Clusium nomine F. pyrenaeae nostram F. nervosam Willd. flore saturate brunneo et paene concolore neutiquam intellexisse, praesertim quum autor nomine F. aquitanicae plantam descripserit et depinxerit, quae sine dubio speciem Willdenowianam ante oculos ponit. Recte monet autem cl. Gawler in diario botanico (botanical magazine) tab. 1538 in pagina aversa, plantam in tab. 664, nomine F. pyrenaicae depictam aliam esse, quam nunc F. nigram appellat et quae eadem ac F. nervosa Willd. Autor florae britannicae, Smith, primus asseveravit, hanc speciem F. pyrenaicam Linnaei esse, quod Clusius, ipse loco citato dicit: „quae (perianthii sepala) extimas oras nonnihil reflexas habebant" et illam, quae antea ab autoribus majore jure pro F. pyrenaica habita est, F. racemosam nominavit. Quam opinionem Schultes, Reichenbach, Grisebach et Grenier assecuti

sunt. Hic autor praeterea suae F. pyrenaicae (F. nervosae Willd.) antea in opere suo „observations botaniques" a. 1838 edito nomen Clusianum F. aquitanicae tribuit, quod nomen servandum esset, nisi Clusius ante Linnaeum et nostrum morem plantarum appellandarum vixisset. — Omnino sepala F. racemosae Sm. apice reflexa neutiquam sunt, sed reliqua verba Clusii et diagnosis Linnaeana cum hac specie magis congruunt, quam cum F. nervosa Willd. (pyrenaica Sm.). Multos annos in horto Berolinensi magna cum diligentia plantae bulbosae coluntur, quae tum ex aliis hortis tum e patriis regionibus acquisitae erant. In hac collectione etiam species Fritillariae colitur, quae proxima quidem F. racemosae Sm., sed scapo 1—5 floro et sepalis apice reflexis diversa. Hujus capsula praeterea columnaris et subito ad basin attenuata, quae in F. racemosa Sm. ab apice lato ad basin sensim angustior. Accedit, quod canaliculi marginum valvarum in capsulas F. racemosae Sm. latiores sunt, quam in nostra planta. Comparata igitur Clusiana descriptione F. pyrenaeae, quin planta horti botanici eadem sit ac vera F. pyrenaica L., non amplius dubito. Attamen accuratiore cognitione forte probatur hanc Fr. pyrenaicam tantum varietatem F. racemosae Sm. esse, quo posito ulterius nomen delendum et F. pyrenaicae restituendum esset. Nunc tamen et dum haec manifestius probetur, internosco species diversas F. pyrenaicam L. et F. racemosam Sm.

1a. FRITILLARIA PYRENAICA L. — Caulis 1—5 florus; folia suprema erecta, flores longitudine superantia; sepala tessellata, ochraceo-brunnea, apice leviter reflexa; capsula columnaris, subito attenuata.

1b. FRITILLARIA RACEMOSA Sm.

Caulis pluriflorus; folia superiora erecta, flores longitudine superantia; sepala tessellata ochraceo-brunnea, apice erecta; capsula obconica, ab apice ad basin attenuata.

2. FRITILLARIA PRAECOX Hort.

Fritillaria alba Hort. Eystett. Ord. III. tab. 8. f. 3.

Glaucescens; caulis plurifolius; folia oblongo-linearia, elongata; flores 1—3, albi, sepalis 5 nerviis, etessellatis; stylus longitudine germinis, quocum dimidium perianthium longitudine aequat; capsula breviter oblonga.

Planta adhuc varietatibus F. Meleagridis L. adnumerata, sed in horto Berolinensi per multos annos culta mutationi non succubuit. Haud aegre a specie, quam supra memoravi, distinguenda foliis 6—8 (nec 4—5) glaucescentibus, latioribus, floribus plerumque 2 et 3 majoribus, semper albis, unicoloribus, et stylo germen aequante, nec longiore. — Caulis 1—1½ pedalis, glaucescens, apice recurvus; folia pruinosa, glaucescentia, punctis albis subtilibus adspersa, erecta, omnia alterna, semipedalia, ½ poll. medio lata, suprema flores longitudine paene duplo superantia; flores solitarii aut 2—3 umbellati, penduli; sepala oblonga, dorso et ad basin extus angulato-carinata, inter se aequalia, sed interiora paululum latiora, poll. longa, 5 lin. lata, nervis 5 aut 7 flavescentibus et longitudinalibus percursa; filamenta basi appendice lata instructa, anguste lanceolata, antheris oblongis et flavis sesquilongiora; germen columnare, teres, vix trigonum. Stylus trifidus, puberulus, mox deciduus, antheras paululum superans.

3. FRITILLARIA LUTEA Bieb. fl. taur. cauc. I. 269. III. 263. — Colore florum variat, ideoque interdum varietas flore magis brunneo cum proxima Fr. latifolia Willd. commutata est. In horto Berolinensi plures varietates coluntur, quae omnes congruunt glaucedine foliorum, sed discrepant sepalis sordide luteis, sordide aurantiacis et dilute brunneis, tessellis spadiceis brunneisque instructis. Icon plantae in diario botanico (botanical magazine) tab. 1207. a cl. Gawler Fr. latifoliae var. α. majoris nomine depictae huc aeque pertinet ac icon tab. 1538. (latifolia β. lutea) et Fr. latifolia Red. Lil. tab. 51. Ipsa icon tab. 853. (sed non descriptio), quia folia glauca exponit, potius ad Fr. luteam referenda est, quam ad veram Fr. latifoliam, quae foliis laete

viridibus et nitentibus, quemadmodum autor cl. Willdenow dicit, discrepat. Magis congruit Fr. lutea Bieb. cum Fr. glaucescente Willd., quae glaucedine convenit, sed flore sordide aureo, vix aut non tessellato, sed brunneo-striato, foliisque latioribus multum differt. Diu in horto botanico nostro culta, neutiquam mutata ideoque certe species distincta, sine dubio ex Oriente introducta, nec hortorum filia. Planta saepe bipedalis, foliis medio pollicem latis insignis. — Fr. aurea Schott, species mihi plane ignota. Fr. luteae proxima, differre dicitur foliis latiusculis subverticillatis; haud dubie Fr. glaucescenti Willd. affinior.

4. FRITILLARIA LYCIA Boiss. et Heldr. in pl. Anat. exs. 1846. — Boissier diagn. pl. n. XIII. p. 20.

Fr. glabra pallide virens, foliis radicalibus 1—2 teneris oblongis vel oblongo-lanceolatis acutis vel obtusis mucronulatis basi in petiolum tenuem eis longiorem attenuatis, caulinis 5—7 parvis omnibus subaequilatis anguste linearibus acutis, flore terminali nutanti foliis supremis superato, perigonio breviter campanulato basi non gibbosa rotundato phyllis striatis non tessellatis rubris extus inaequaliter luteo suffusis obovato-cuneatis vel subdeltoideis a basi angustiori sensim dilatatis apiceque abrupte et breviter angustatis exterioribus saepius angustioribus elliptico-linearibus, filamentis dilatatis superne subangustatis parce et brevissime puberulis perigonii tertiam partem aequantibus anthera breviter mucronata duplo longioribus, stylo glabro antheras superanti ad medium usque trifido.

Hab. in pinetis montis Solyma Lyciae (Heldr.). Fl. fine martii. — Caulis 10—12 pollicaris, folia radicalia 12—18 lineas longa 4—5 lata, caulina 2—3 pollices longa lineam unam lata. Flos illo Fr. Messanensis multo brevior. Inter Fr. Graecam et Fr. acmopetalam fere media huic petalorum forma accedens sed distincta foliis caulinis angustissimis, perigonio magis abbreviato, filamentis non hirsutissimis. Fr. Graeca foliis omnibus caulinis ab infimis ad suprema sensim angustioribus, perigonii phyllis oblongis omnibus subaequilatis late virescenti-fasciatis subtessellatis longius distat. Fr. Messanensis est planta multo robustior, perigonio longiuscule cylindrico etc.

5. FRITILLARIA AUREA Schtt. — Schott Oestr. bot. W. Bl. 1854. p. 137.

F. inferiorib. elliptico-lanc., superiorib. lanc-linearib., omnib. promiscue verticillatis (ternis), oppositis et alternis; fl. solitario cernuo, late campanulato, aureo, sanguineo-tessellato; sep. exteriorib. cuneato-obovatis 7-nerviis (exclusis ramulis lateralib.), interiorib. obovatis 9-nerviis, omnib. fovea nectarifera sagittata v. cordato-triangulari auctis.

Hab. in Tauro (Kotschy). — A Fr. lutea Bieberst. cui fere florum colore et magnitud proxima, fol. infimis latiusculis, plerumq. verticillatis v. subverticillatis, tessellis crebriorib., obsoletiorib., saepe maculis v. lineolis tantum indicatis, vasorum in sepalis numero differt.

6. FRITILLARIA OXYPETALA Hook. — Hook bot. mag. 1853. tab. 4731.

F. linearib, s. lin-lanc. alternis radicali lanceolato b. longe attenuato, caule 1-fl., fl. nutante, sep. dem. patentib. oblongo-ovatis acutis b. contractis subunguiculatis, ungue nectarifero ext. et int. ad bas. laminae pilis fasciculatis barbato, bulbo sq. elongatis erectis tunicato.

Fr. oxypet. Reyle, bot. Himal. p. 388.

Lem. jard. fleur. IV. tab. 422. — Species pr. Pindari, Kumaon, in alt. c. 12500' detecta.

7. FRITILLARIA ROYLEI Hook. — Hook. Ic. pl. ser. nov. V. tab. 860. (Munroanae).

Caule b. longe nudo surs. folioso, 1—2—3 floro, foliis infimis oppositis superiorib. verticillatis 4—5-nisve lanc. attenuatis (non cirrosis), fl. nutante tessellato, sep. b. non gibbosis.

Fritillaria verticillata, Wall. Cat. n. 5079. — Royle, Ill. Himal. bot. 387. t. 92. f. 2 (non aliorum). — *Fritillaria cirrhosa* Don, pr. Fl. Nep. p. 51?

Hab. In montib. Himalayae in provinciis Kamaoun, Gurwhal, Simore et Punjab.; in altitud. 9—12000'.

8. FRITILLARIA PTEROCARPA J. E. Stocks. — J. E. Stocks in Hook. j. Kew gard. misc. IV. 180. — Caule pubesc. 1-pluri-fl., f. 2 infim. approximatis pseudo-opposit. lanc., caulinis linearib. floralib. binis, pedunc. florif. horizontalib., p. anthesin ap. deflexis, fructifer. erect., perigonii sepal. brevit. calcarato-gibbos., sordide purpurascentib., venis saturatiorib., calcarib. atro-fuscis, staminib. b. pilos., stylo integro, ovario turbinato 6-sulcato, 6-angulato, vertice truncato cornubus 6 coronato. Caps. depressa 6-sulcata (sulcis alternis saepius profundiorib.) 6-angulata, angul. obtus. v. acutis v. alatis surs. in cornua productis. — H. Beloochistan super. — Fl. inconspic., fusco-colorati.

9. FRITILLARIA DELPHINENSIS Gren. in litt. — Godr. et Gren. fl. de Fr. III. p. 180.
Fr. tubaeformis Godr. et Gren. mem. soc. emul. Doubs, may 1854.

Flores purpureo-brunnei, rarius lutei, campanulati (fere tam lati quam longi), perig. divisionib. maculis quadrangularib., alternatim obscuriorib. v. laetiorib. et saep. parum distinctis variegatis, exterioribus 3 oblongis, obtusis, interiorib. 3 majorib. obovatis ap. valde rotundatis. Stam. stylo ovarium superante breviora v. eum aequantia. Stylus obconicus, fistulosus, a b. ad ap. sensim sensimque dilatatus, stigmatib. brevissimis tridentatus. Caps. oblonga. F. 4—6, ascendentia, flori approximata, lanc.; inferiora obtusa, superiora acuta. Bulbus parvus.

Hab. Hautes alpes du Dauphiné, environs de Gap. etc. — ♃. Aug.

Icones addendae.

FRITILLARIA PALLIDIFLORA Schrenk. — Regel Gartenfl. VI. tab. 209.
FRITILLARIA KAMTSCHACENSIS. — Regel Gartenfl. V. tab. 173.
Fr. imperialis Lin. — A. Berg Med. Pfl. tab. 126.

X b. AMBLIRION *Raf.*

(Knth. en. IV. 255. sub Fritillaria.)

1. AMBLIRION PUDICUM, var. *biflorum* Torr. (Knth. en. IV. 255). — Torrey in Stensbury expedit. at the Salt Lake p. 396. n. 29. tab. IX.

Caulibus omnib. bifloris.

Radix depressa, orbicularis, margine dentata, supra tuberculis plurimis obsita. Flores lutei, nutantes, fere 1 pollic. longi, obconici v. subinfundibuliformes, omnino nectario destituti. Simplex et indivisus.

X c. THERESIA *Koch.*

(Walp. Ann. III. 628.)

1. THERESIA LIBANOTICA Boiss. — Boissier diagn. XIII. p. 20.

Th. foetida tota farinoso-glauca, caule crasso elato tota longitudine folioso, foliis alternis (aliquando nonnullis ternatim subverticillatis) oblongo-lanceolatis acutiusculis basi sessili amplexicaulibus, floribus numerosis racemum terminalem laxum elongato-pyramidatum formantibus pedunculis perigonio sesquilongioribus apice subnutantibus suffultis, perigonii breviter campanulati per anthesin subpatentis basi rotundati non gibbosi phyllis ellipticis obtusissimis utrinque flavo-virentibus striis tenuissimis fuscis apice furcatis eleganter pictis, nectario basilari breviter ovato, filamentis perigonio subbrevioribus antherarum lutearum basi perforatae insertis, stylo staminibus breviori simplici apice obscure stigmatoso, capsulis papyraceis fuscescentibus erectis depressis abbreviatim hexagonis acutangulis trilocularibus, seminibus biserialibus

compresso-planis obovatis basi angustatis apice rotundatis anguste membranaceo-marginatis.

var. α. *bracteata* — Bracteae lineares paulo infra pedunculum ortae eoque paulo longiores.

var. β. *ebracteata* — Racemus omnino ebracteatus.

Hab. ambo formae mixtae sed β. rarior in lapidosis umbrosis regionis mediae Libani, in via inter Beyrouth et Damascum supra Khan Hussein, circa Eden copiose. Videtur florere primo verē, caules jam fructiferos Maii fine legi bulbosque e quibus specimina florifera educavi. — Planta odore gravi Lantanae vel urinae felinae tota polline glauco detersili obsita. Caulis florifer 1½—2 pedalis fructifer tripedalis et ultra. Folia inferiora 4—6 pollices longa pollicem et amplius lata usque ad caulem summum sensim decrescentia; bracteae cum adsunt 1½—2 pollicares 1½ lineas latae. Racemi 15—25 flori floriferi pedem dimidium fructiferi 1—1½ pedes longi. Pedunculi 1—1½ pollicares. Flores paulo majores eis Theresiae Persicae C. Koch — Fritill. Persicae L. Phylla 6—7 lineas longa 3½ lata. Capsula formae et fere magnitudinis earum Petilii imperialis sed tenuius membranacea et angulis angustius alatis donata. Semen tres lineas longum superne 2 lineas latum. Th. Persica cui affinis differt odore nullo, foliis angustioribus, floribus brunneo-violaceis intus viridi-maculatis, antheris e perigonio subexsertis purpureo-fuscis, racemo breviori abbreviatim pyramidato; hujus capsulam non novi nec comparare potui. Genus Theresiae a Fritillaria distinctissimum est forma capsulae et bulbo non tuberoso sed squamoso omnino Lilii, a Petilio autem eodem bulbo eademque capsula donato tantum differt inflorescentia et stylo integro nec apice trilobo.

XII. LILIUM *L.*

(Walp. Ann. III. 628. — Knth. en. IV. 256 et 637.)

Griffith notulae (1851) tab. 276.

CONSPECTUS NATURALIS SPECIERUM GENERIS LILII L.

Morren in Fuchsia (Bruxelles 1849) p. 6.

LILIUM

- *Lilium*, perianth. campanulatum
  - fl. nutantes
    - corollae campaniformes ..... *L. candidum* (1), *peregrinum* (2), *Thomsonianum* (3), *Nepalense* (4),
    - corollae tubiformes .... *Japonicum* (5), *eximium* (6), *Wallichianum* (7), *longiflorum* (8),
  - fl. recti .. *L. bulbiferum* (9), *croceum* (10), *pubescens* (11), *davuricum* (12), *fulgens* (13), *Thunbergianum* (14), *venustum* (15), *concolor* (16), *pulchellum* (17), *Catesbaei* (18), *lancifolium* (19).
- *Martagon*, perianth. revolutum.
  - fl. cernui ..
    - f. verticillatis .... *L. Martagon* (20), *Canadense* (21), *maculatum* (22), *Carolineanum* (23), *superbum* (34), *pendulum* (25).
    - f. sparsis ..
      - elongatis .. *L. speciosum* (26), *testaceum* (27), *tigrinum* (28), *Szovitzianum* (29), *Loddigesianum* (30), *monadelphum* (31), *Carniolicum* (32), *pomponium* (34), *Pyrenaicum* (35), *Chalcedonicum* (36), *tenuifolium* (37), *pumilum* (38).
      - cordatis .. *L. giganteum* (39), *cordifolium* (40).
  - fl. recti .... *L. Philadelphicum* (41), *Camschatkense* (42).

1. LILIUM SINICUM. — Paxton fl. gard. II. n. 384. xylogr. fig. 198.

Caule humili ap. 2—3 floro subtomentoso, f. sparsis oblongo-linearib. vix pubesc., supremis sub floribus verticillatis, pedunculis nunc supra med. monophyllis, perianthii lacin. revolutis sessilib. int. laevib. circa rimam pubescentib., staminib. perianthio breviorib. pistillo longiorib., ovario obovato obtusissimo styli longitudine.

Planta e China in hortos introducta. — Species minima, vix ultra pedalis, florib. parvis atro-purpureis (1—1½ pollic.). Fortasse varietas tantum L. concoloris.

2. LILIUM (§ *Notholirion* Wall.) ROSEUM Hook bot. mag. tab. 4725.

F. alternis flaccidis, lin-acuminatis carinatis, superiorib. remotis multoties breviorib., fl. racemosis cernuis subinfundibuliformib., sep. l-formib. spathulatis apicib. reflexis ad bas. usq. distinctis basin versus maculatis, staminib. declinatis sepalor. longitudine, stigmate trilobo, „caps. turbinatis obtuse hexagonis".

Lilium roseum Wall. Cat. n. 5077. et var. β. — *Fritillaria Thomsoniana* Royle illustr. p. 388. tab. 92. — Knth. en. IV. p. 672. — *Lilium Thomsonianum* Lindl. (Walp. Ann. I. 852. n. 1). — Fl. d. serres IX. tab. 867.

Planta indigena in Gossain Than et Kamaon, in Mussoree et in Almora (altit. 8000').

3. LILIUM ODORUM Planch. — Fl. des serres IX. tab. 876—877.

Glabrum, caule 1½—2 pedali 1 v. rarissime 2-floro tereti erecto folioso, f. sparsis anguste lanc. b. sensim attenuatis (haud vere petiolatis) ap. acuminatis acutis 3—5 nerviis, flore brevit. et crasse pedunculato terminali cernuo infundibuliformi-campanulato suaveolente, perianthii foliolis obovato-oblongis (4—5 poll. longis) obtuse acuminatis superne expansis, intus versus basin villosis caeterum glabris albis extus colore violaceo plus minus maculatis v. suffusis, antheris (polline effuso) ellipsoideis brevib. crassis, polline lutescenti-brunneo.

L. Japonicum Lodd. bot. Cab. tab. 438, non Thunb. — Fl. Jap. 133, ex specimin. authent. in herb. Deless.

E China in hortos Europaeos traducta.

4. LILIUM TENUIFOLIUM (hort. nec Fisch.?) — (An potius L. pumilum? DC.) — (§ Martagon.) Bulbo minimo subtrigono-oviformi, sq. externis oblongis involventi-applicatis truncatis, internis majoribus ovatis ap. attenuatis, caule cylindrico gracili firmo, fol. sparsis infer. distantib. medianis congestis, superne fere nullis, omnib. exacte linearibus carnosulis acutis recurvis supra canaliculatis infra carinatis intense viridibus v. subglaucescentibus sub lente punctulis albidis creberrimis in utramque faciem notatis, pilis nonnullis subpenicillatis axillaribus, floribus 2—5—7 (v. minus) laetissime aurantiaco-coccineis nitidis suavissime potentissimeque fragrantibus; racemo subflexuoso inter flores alternatim compresso; pedicellis elongatis arcuato-curvatis basi bibracteatis, bracteis foliis conformibus basique lanatis ad ap. inflatis sulcatis; perigonii segmentis aequalibus conformibus oblongo-lanc. ap. implicato-obtusis puberulo-fimbriatis, arcte cito revolutis, 3 externis subtus imo gibbulo carinam terminante viridi; omnibus utraque facie alte plurisulcato-costatis, ad medium altius sulcatis, intus sulci plicae de medio ad imum confluentes bilabiatim papillosulae (nectarium?) filamentis segmentorum longitudinem mediam attingentibus, graciliter subulatis ap. longe attenuatis; ovario trigono sexsulcato oblongo ap. rotundato nec inflato; stylo robusto quam ovarium paulo longiore trigono claviformi rubro-ferrugineo, stigmatibus ovatis violaceis... etc. — (Ad vivum nat. Ch. Lem.)

? *L. tenuifolium* Fisch. hort. Gorenk. — Reichb. mag. tab. 79. — Hook. bot. mag. tab. 3140. — Sweet brit. fl. gard. tab. 275? — (*L. reflexum* montanum humile etc. Am. Ruth. 138. (1739). — Radice tunicata, f. sparsis caet. Gmel. Sib. tab. 42. f. 9). — An forsan *L. pumilum* DC. in Redouté Lil. tab. 378. bot. reg. tab. 132. — Bot. Cab. tab. 358. — *L. linifolium* Hornem. (Schulte VII. 410)???

Icones addendae.

LILIUM NEILGHERRENSE R. W. — Wight Ic. tab. 2031—2032.
LILIUM TUBIFLORUM R. W. — Wight Ic. tab. 2033—2034.
LILIUM GIGANTEUM Wall. (Knth. en. IV. 268). — Fl. d. serres VIII. tab. 771—772. — Hook. bot. mag. tab. 4673. — Lem. jard. fl. IV. tab. 409—410.
LILIUM WALLICHIANUM Schult. — Knth. en. IV. 267. n. 30. — Hook. bot. mag. t. 4561. Wight. Ic. tab. 2035.
LILIUM LONGIFOLIUM Griffith not. (1851) tab. 277. Itin. notes p. 345. Afghan. n. 87. —
LILIUM JAMA-JURI Sieb. et de Vr. — de Vriese Tuinbouw Flora 1855. I. tab. 11.
LILIUM CORIDEON Sieb. et de Vr. — Tuinbouw Flora II. p. 341. c. tab.
LILIUM PARTHENEION Sieb. et de Vr. — Tuinbouw Fl. II. l. c. c. tab.
LILIUM VENUSTUM Knth. (Knth. en. IV. p. 264). — Fl. d. serres VII. tab. 657.
LILIUM SUPERBUM Lin. — Fl. d. serres X. tab. 1014—1015.
LILIUM CANADENSE L. var. occidentale: Paxton fl. gard. III. p. 159. xyl. 308. — Foliis angustis revolutis, petalis aurantiacis revolutis purpureo-notatis. — Habit. California.
LILIUM LODDIGESIANUM Paxton fl. gard. II. pl. 58. p. 105. — Kunth en. IV. 261. — Walp. Ann. I. 853.
LILIUM SPECIOSUM Thunb. var. β. *punctatum*. — Endl. hort. Vindob. tab. I. — F. oblonga, perigonii foliola intus rosea, papillis roseis. — E Japonia introduxit Siebold.
LILIUM (hybrid.?) EXCELSUM hort. (Seem.) — Endl. hort. Vindob. tab. II. — Caule erecto villoso, f. sparsis, inferioribus . . ., superioribus subovato-lanc.; racemis multi- (usque ad 13-) floris, fl. cernuis, perigonii foliolis sessilibus campanulato-conniventibus . . . intus . . . punctatis; antheris . . ., stigmate viridi. — Patria ignota.
LILIUM CALLOSUM Zucc. — Endl. hort. Vindob. tab. III.

Ordo XXVI. ASPHODEAOLEAE *Knth.*

(Walp. Ann. III. 631. — Knth. en. IV. 280.)

Tribus I. *HYACINTHEAE* Endl.

(Walp. Ann. l. c. — Knth. l. c. 281.)

IX. HYACINTHUS *Linn.*

(Walp. Ann. I. 854. — Knth. en. IV. 303.)

1. HYACINTHUS NANUS Roem. et Schult. — Puschkinia scilloides Sieber Reise in Creta II. tab. 7. — Hab. in Cretae montibus Sphacioticis elatis (Sieber), montes Lassiti alt. 4000—5000′ (Heldr.). Fl. Maio. — Planta 3—4 pollicaris. Folia $1\frac{1}{2}$—2 lineas lata. Flos eo C. Luciliae dimidio minora a qua habitu, magnitudine et colore floris certe distincta est. Laciniae perigonii $3\frac{1}{2}$—4 lineas longae lineam $1\frac{1}{4}$ latae.

2. HYACINTHUS AMOENUS Jord. — Jordan pug. nov. pl. p. 140. — Racemo laxifloro, fl. sub anthesi erecto-patulis mox patentib. albidis suaveolentib., pedicellis abbreviatis, bracteis albis lanc. rarius bilobis fere exappendiculatis, corollae infundibuliformis tubo flavescenti-albido oblongo-lineari laevi subanguloso, inferne subaequali b. haud umbilicato, laciniis paulo breviorib. oblongis patulis dorso carinatis ap. callosis, filam. staminum infra medium tubi adfixis lanc. acuminatis, antheris linearib. ap. obtusis pallide roseo-lilacinis filamento subtriplo longioribus tubo corollae valde brevioribus, stylo sulcato, ap. brevit. papilloso, ovario rotundato obtuso subduplo breviore antherar. basin superante, caps. globosa obtuse trigona b. profunde umbilicata ap. parum

depressa, f. laete virentibus linearib. canaliculatis ap. angustatis suberectis, scapis erectis foliis longioribus, bulbo rotundato tunicato pallide violaceo. — Hab. in apricis nemor. Galloprovinciae pr. Grasse et agri Genuensis. — Fl. Martio. — A praecedente statim dignoscitur fl. albidis minorib. caet. — Sub nomine: Jacinthe blanche petite de montagne cultam saepe vidi.

3. HYACINTHUS PROVINCIALIS Jord. — Jordan pugillus pl. nov. praesert. Gallicar. 1852. p. 139. — Racemo valde laxifloro, fl. paucis fere secundis distantib. sub anthesi erecto-patentibus amoene coeruleis suaveolentib., pedicellis longiusculis tubi corollae diametrum transversalem superantibus, bract. subalbidis ap. bilobis b. appendiculatis corollae infundibuliformis tubo oblongo lineari ruguloso subanguloso inferne leviter ventricoso b. fere umbilicato, laciniis paulo brevioribus linearibus patulis recurvatisque subtus dorso carinatis ap. callo prominulo instructis, filamentis staminum lanceolatis acuminatis in tertia parte inferiore tubi adfixis, antheris linearib. subacutis pulchre violaceis tubo corollae breviorib. filamento duplo longioribus, stylo sulcato ovario subrotundo-ovato breviore, caps. globoso-ovata obtuse trigona b. paulisper umbilicata ap. depressa, f. intense virentibus linearib. eximie canaliculatis ap. angustatis arcuato-patulis ascendentib., scapis erectis foliis brevioribus, bulbo tunicato violaceo, rotundato. — H. orientalis auct. gall. n. Lin. — Hab. in apricis Galloprovinciae pr. Toulon. — Fl. Martio. — Plures sine dubio exstant species cultae varietatibus H. orientalis L. falso adjunctae.

4. HYACINTHUS ORIENTALIS var. β. phyllantha. — Vis. fl. Dalm. III. p. 352. add.

Bracteis in f. linearia longissima racemum superantia productis.

Habui insignem hanc abnormitatem ex agris c. Cittavecchia ins. Lesina a Prof. Stalio.

Icon addenda.

HYACINTHUS PURPUREUS Gr. — Griff. notulis (1851) p. 242. t. 275. Itin. not. p. 388. Afghan. n. 60.

IX a. CHIONODOXA *Boiss.*

(Walp. Ann. I. 854. n. 1. sub Hyacinthus.)

1. CHIONODOXA CRETICA Boiss. et Heldr. in pl. Cret. exs. 1847. — Boissier diagn. pl. n. XIII. p. 24.

Ch. foliis lato-linearibus planis flaccidis erectis apice subcucullatis obtusis scapum aequantibus superantibusve, scapo apice 1 saepius laxe 2—5 floro, pedunculis erectis perigonio 1—2 plo longioribus, perigonii caerulei laciniis oblongis obtusissimis nervo medio tenui percursis, filamentis subaequilongis albidis apice valde retusis, antheris filamento subaequilongis.

Hab. in fruticetis Berberide consitis regionis subalpinae montium Sphaciotieorum supra Askyphous (Heldr.) Fl. Aprili ineunte. — Scapi saepe 6—10 pollicares. Folia 4—6 lineas lata, flores vix minores illis Ch. Luciliae minusque patentes. Huic speciei valde affinis ab ea sat differre videtur foliis dilatatis, scapo plerumque multifloro, perigonii laciniis brevioribus obtusis, filamentorum longitudine, antherae eis hujus speciei breviores pauloque acutiores sunt. Diagnosis Ch. Luciliae sic emendanda: Ch. foliis anguste linearibus subcanaliculatis recurvato-flexuosis, scapis subunifloris, perigonii laciniis oblongo-lanceolatis alternatim acutiusculis, fl. alternatim longioribus.

2. CHIONODOXA NANA Boiss. et Heldr. in pl. Cret. exs. 1847. — Boissier l. c. p. 24.

Ch. foliis anguste linearibus subcanaliculatis obtusis subrecurvo-patentibus, scapo foliis subaequilongo unifloro rarius bifloro, perigonii pallide lilacini inferne albidi laciniis elliptico-linearibus obtusis nervo saturatiori percursis, filamentis apice truncato-retusis alternatim sesquilongioribus.

XI. BELLEVALIA *Lap.*

(Walp. Ann. I. 865. — Kath. en. IV. 306.)

1. BELLEVALIA MACROBOTRYS Boiss. — Boissier diagn. pl. n. XIII. p. 35.

Foliis late lanceolato-linearibus superne attenuatis scapo aequilongis viridibus margine sub lente minute et remote serrulato-scabridis, scapo elato in racemum laxum post anthesin longissimum abeunti, pedunculis basi squamula vix perspicua obsitis flori aequilongis fructu triplo longioribus et tunc arcuato-patentibus, floribus omnibus fertilibus caeruleis demum livescentibus, perigonio campanulato infra tertiam partem usque partito, filamentis dilatatis triangularibus paululum infra tubi divisionem insertis, antheris rubello-ferrugineis, capsulae trigonae valvulis ovatis subretusis elevatim penninerviis sub lente areolatis.

Hab. in arvis Palaestinae calidioris in regione Amalecitarum ad meridiem urbis Gaza sita, inter Ramla et Hierosolymam legi flor. Aprili. — Scapus cum racemo saepe bipedalis, hic fructifer pedalis et ultra pedunculis pollicaribus aliquando subverticillatis. Folia 7—15 lineas longa, flores tres lineas longi illis B. Romanae paulo minores angustioresque; haec insuper differt foliis angustioribus, filamentis profundius insertis, antheris azureis. B. dubia distinguitur foliis angustis, pedunculis fructiferis capsula non longioribus. B. trifoliata denique floribus sex lineas longis breviter pedunculatis, antheris caeruleis longius distat.

2. BELLEVALIA FLEXUOSA Boiss. — Boissier l. c. p. 36.

B. foliis anguste lanceolato-linearibus apice attenuatis scapo aequilongis margine denticulato-scabridis parallele multinerviis, scapis 1—4 ex eodem bulbo supra basin curvatis ascendentibus in racemum sub anthesi brevem ovatum fructiferum laxum abeuntibus, floribus livescentibus pedunculo flore subbreviori fructu aequilongo vel sesquilongiori patuloque suffultis, squamulis ad pedunculorum basim minimis, perigonio campanulato vix ad tertiam partem sexpartito, filamentis triangulari-elongatis tubo ad ejus divisionem insertis, antheris caeruleis, capsulae trigonae valvulis ovatis obtusis mucronulatis sub lente elongatim areolatis.

Hab. in pratis siccis et muris humo tectis circa Hierosolymam frequenter. Floret Aprili (Boiss.) — Folia ut et scapi 3—5 pollicaria. Racemi 10—20 flori fructiferi 2—2½ pollicares, pedunculi fructiferi 3—5 lineas longi. Folia 2—4 lineas lata. Flores tres lineas longi. A praecedenti distinctissima statura humili, foliis angustis, pedunculis brevibus, antherarum colore. Inter species pumilas et angustifolias ejusdem generis B. glauca Kth. differt pedunculis fructiferis valde elongatis, antheris caesio-ferrugineis, foliis ciliatis; B. Romana et B. dubia foliis longioribus, perigonio multo profundius fisso, capsula majori.

3. BELLEVALIA WEBBIANA Parl. — Parlatore nuovi generi et spec. di piante monocotyl. 1854. p. 19.

Racemo sub anthesi cylindrico, pedunc. flore breviorib., recurvis, fructiferis horizontalib., bracteis minimis, florib. pendulis, summis paucis neutris, subsessilib., perigonii phyllis ad tertium tantum ab ap. liberis, laciniis ovatis, acutiusculis, subconniventib., filam. subulatis, capsulis triquetris subrotundis emarginatis, scapo terete, erecto, foliis breviore, foliis lin-lanceolatis, obtuse mucronatis, canaliculatis, glabris, glaucescentib., erectis, bulbo ovato.

Bellevalia dubia Reichb. fl. Germ. exc., excl. syn. Guss.

Hab. in locis sterilib., rarius in montosis et alpinis Italiae centralis. — Fl. Aprili et Majo.

XII. BOTRYANTHUS *Kuth.*
(Kuth. en. IV. 310. — Walp. Ann. I. 856.

1. BOTRYANTHUS STEREOPHYLLUS Herbich. — Herb. in Oestr. bot. W. Bl. 1855. p. 182.

F. lanc., rigidis striato-nervosis, corollis campanulatis, fauce aperta, bulbo diphyllo.

Bulbus ovatus. F. erecta, rigida subcoriacea lin-lanc., acuta glaberr., striato-nervosa, scapo breviora, inferne purpurascentia. Scap. 3 - v. 4 - unc., erectus, teres, glaberr., b. purpurascens, superne coerulesc., et gerit flores ad 10—15. Pedic. 1-ß., patuli, coerulesc., bract. exiguis suffulti. Fl. in rac. dispositi, minimi, dilute coerulei, campanulati, limbo sexfido, laciniis angustis, tubo corollae brevioribus. — In rupibus praeruptis littoris flum. Danastris pr. Dorosschons. Maj. ♃.

XIII. MUSCARI *Tournf.*
(Walp. Ann. III. 631. — Kuth. IV. 313.)

1. MUSCARI LONGIPES Boiss. — Boissier diagn. nov. XIII. p. 36.

M. foliis lineari-lanceolatis inferne angustatis apice longe attenuatis canaliculato-plicatis margine subundulatis sub lente scabrido-denticulatis parallele multinerviis scapo brevioribus, scapis erectis in racemum pyramidatum abeuntibus, pedunculis horizontaliter patentibus perigonio florido aequilongis vel sesquilongioribus perigonio fructifero 4—6 plo longioribus, floribus caerulescenti lividis supremis sterilibus paucis amethystinis brevissime pedunculatis, perigonio urceolato-cylindrico subpyriformi parte inferiori infra stamina subangustato apice constricto brevissime et rotundatim quinquelobo, filamentis brevissimis planiusculis versus mediam partem perigonii in duas series quarum altera altior insertis, antheris brevibus rufescentibus, capsula (juniori) pedunculo multoties breviori oblonga apice attenuata valvulis parallele et transverse nervosis.

Hab. in arvis pinguibus Palaestinae littoralis calidioris ad meridiem urbis Gaza sitis et in regione Philistaeorum ad septentrionem ejusdem urbis (Boiss.) Fl. Aprili. — Species insignis inflorescentia Bellevaliae ciliatae et floribus Muscaridis. Folia latitudine a 4 ad 11 lineas variantia. Racemi fructiferi 4—6 pollicares ob pedunculos inferiores saepe bipollicares eximie pyramidati. Perigonium sub anthesi $3\frac{1}{2}$—4 lineas longum. Ab omnibus aliis generis inflorescentia, staminum insertione, etc. diversa.

Obs. Botryanthus Sauli Jaub. et Sp. Illustr. pl. Or. tab. 320 est Muscari moschatum W.

Icon addenda.

MUSCARI BOOTANENSIS. — Griff. Ic. pl. Asiat. notulae (1851) tab. 280.

XIV. SCILLA *Linn.*
(Walp. Ann. III. 631. — Kuth. IV. 314 et 679.)

1. SCILLA NATALENSIS Planch. — Fl. d. serres X. tab. 1043. p. 185. — Bulbo crasso ovoideo subgloboso squamoso, f. subcoetaneis lin-lanc. acuminatis acutis, scapo erecto tereti foliis longiore, racemo simplici longo multifloro, bracteis ad basin floris cujusve subulatis, pedicello plane evoluto subpollicari fere dimidio brevioribus, floribus pallide et amoene coeruleis, perianthii 6 - partiti stellato - patentis laciniis ellipticis obtusis, staminum filamentis edentulis subulatis albis perianthio brevioribus, ovario ovato triloculari, stylo brevi (char. ex icone et e memoria stirpis vivae olim in horto Houttiano observatae).

Sc. Natalensis Planch. in hort. V. Houtt.

Habit. Port Natal.

2. SCILLA PULCHELLA Munby. — Bullet. de la soc bot. de Fr. II. 286.

Racemis capitatis, paucifloris; pedicellis patentib., nudis, perigonium excedentibus; bulbo tunicato; f. serotinis, filiformibus.

Planta 2 p. alta, fl. et pedic. amethystini. — In Algeria pr. Oran.

3. SCILLA DUBIA C. Koch in Linn. XIX, 315.

Scilla bifolia L. β. dubia C. Koch in Linn. XXII. 251. — Id. in ind. sem. h. Berol. 1855.

Plantam denuo speciem propono, specimina viva in horto nostro botanico accurate perscrutatus; differt a simili S. bifolia L. caulis et foliorum angustiorum, non planorum sed canaliculatorum brunnescentia. Bracteae sunt magis laterales et persistentes, nec deciduae; sepala in pagina utraque violaceo-coerulea, quae in S. bifolia L. supra dilutissime, subtus saturate coerulea. Tota denique planta multo minor.

4. SCILLA CERNUA. — Red. Liliac. ad tab. 298, nec Hoffmsgg. et Lk.

Scilla sibirica Andr. in bot. rep. t. 365. — Koch l. c.

Ineunte jam nostro saeculo in hortis anglicis culta planta neutiquam in Sibiria crescit, quam ob rem nomen sibiricae Andr. penitus rejiciendum est. Primum e horto quodam Petropolitano Camboricum introducta et in horto Walkeriano summa admiratione affecta ab Andrew, artifice in plantis pingendis in ejus diario botanico (botanical repository) tab. 365. depicta est. A. 1807 in alio diario (botanical magazine tab. 1005.) denuo nomine S. amoenae sibiricae proposita, ab indagatore indefesso terrarum caucasicarum Marschal ab Bieberstein in volumine primo florae suae taurico-caucasicae p. 278. descripta est. Iidem cl. Redouté plantam caucasicam nomine S. amoenae depinxit in t. 130, sed mox specie propria cognita a. 1809 in adnotatione tab. 298, S. cernuam appellavit, quod nomen, S. sibiricae Andr. appellatione ob falsam patriam jure rejecta, nunc servandum est. Hornemann, horti Hafniensis botanici director, plantam coluit a. 1813 et, nominis Redouteani aeque ac Andrewsiani nullam notitiam habens, iterum nomine novo Scillae amoenulae (hort. Hafn. I. 131) proposuit. Mosquensis denique Goldbach plantae nostrae aliam patriam quam Sibiriam, sed non minus falsam, Rossiam meridionalem, tribuit et appellatione Andrewsiana jure rejecta Scillam sibiricam tum S. azuream (mém. da la soc. d. natur. de Mosc. V. 125) nominavit. Sed cl. Marschal ab Bieberstein in volumine tertio a. 1819 in lucem edito pag. 266 rebus ad plantam caucasicam pertinentibus optime expositis, nomen Redouteanum restituit, quod etiam in hortis nostris adhibendum est.

5. SCILLA HOHENACKERI F. et M. in Hohenack. enum. pl. Tanysch. p. 26. — Koch l. c.

Folia mox humifusa, laxa; scapus erectus pluriflorus, floribus inferioribus longe pedicellatis; bracteae brevissimae; corolla late urceolata; ovarii loculis sub 13-ovulatis.

Haec species ab autoribus cum S. cernua Red. conjuncta ab hac et a S. amoena L. longe differt foliis sub anthesi humifusis, nec erectis et postremo laxis; serius etiam quam species affines floret. Flores S. cernuae sunt solitarii aut bini, rarius terni et magis cernui. — Folia plura, late linearia, apice leviter cucullata, sub anthesi magis minusve in terram prostrata, scapo vix longiora; scapi plures ex eodem bulbo, latere extrorso convexi, introrso planiusculi, 2—4 flori, ex parte superiore paululum brunnescentes; bracteae persistentes, latissimae, saepe bilobae, perparvae, pedicello multoties breviores; pedicelli inferiores florem longitudine plerumque superantes, superiores ab eo superati; flores inferiores suberecti, supremi horizontales, vix cernui, ample campanulati; petala oblongo-lanceolata, a nervo medio saturato percursa, pagina inferiore pallidiora, filamentis duplo, stylo contra triente parte longiora; antherae azureae, dorso affixae, ab initio introrsae; germen sexsulcatum, triloculare; loculi 13-ovulati; ovula biserialia, anatropa.

6. SCILLA ELONGATA Parl. — Parlatore e nuovi gen. nuove specie di piante monocotyled. 1854. p. 24.

Racemo magno, obovato, obtuso, multifloro, conferto, pedunc. flori-

feris erecto-patentib., flore multoties longioribus, fructiferis longissimis, perigonii phyllis elliptico-lanc., acutiusc., filamentis lanc-subulatis, pistillo staminib. breviore, ovario oblongo, bract. lanc-linearib., ciliatis, 1-nerviis, pedunculo florifero subtriplo brevioribus, f. late lanceolato-linearib., obtusiusc., planiusculis, marg. longiuscule et dense ciliatis patentib. viridibus, scapo longioribus.

Bulbus illius plantae a Sign. Fox-Strangways e Constantinopoli in hortum bot. Ferentino ann. 1832 allatum. — Flore primo m. Majo.

XIV a. NECTAROSCILLA *Parl.*

Parlatore nuovi gen. e specie di piante monocotyled. 1854. p. 26.

Perigonium corollinum, rotato-patens, persistens, hexaphyllum, phyllis ima b. connatis, aequalib. Stam. 6, perigonii phyllis ima b. inserta, subaequalia. Filam. subulata. Antherae lin-oblongae, ap. bilobae, b. bifidae, medio dorsi affixae, secund. longitud. dehiscentes. Pollen elliptico-lanceolatum utrinque acutum, laeve. Ovar. liberum, brevit. stipitatum, ovato-subrotundum, leviter et obtuse 6-costatum, externe ad b. dissepimentorum crassissimorum foris tribus nectarifluis instructum, 3-loculare. Ovula in loculis 2, obovata, collateralia, in angulo centrali prope b. affixa, adscendentia, anatropa. Stylus filiformis flexuosus b. sulcatus. Stigma obtusum, integrum. Capsulam non vidi.

1. NECTAROSCILLA HYACINTHOIDES Parl. — *Scilla hyacinthoides* Lin. (Kunth en. IV. 316). — Prope Nizza, Genova, Firenze, Napoli caet.

XIV b. ENDYMION.

(Dumort. fl. belg. p. 140.)

(AGRAPHIS Lk.)

Endl. en. 1128.

Gren. et Godr. fl. d. Fr. III. p. 214.

1. ENDYMION NUTANS Dumort. l. c. — Gren. et Godr. l. c. — *Agraphis nutans* Lk. — *Scilla nutans* (Kunth en. IV. p. 327. n. 28).
2. ENDYMION PATULUS Gren. et Godr. — Gren. et Godr. l. c. — *Scilla patula* (Knth. l. c. n. 27).
3. ENDYMION (*Agraphis*) CAMPANULATA Germ. de St. Pierre. — Bullet. d. l. soc. bot. d. Fr. I. p. 165. — (Note sur la nature du bulbe.)

XIV c. ADENOSCILLA *Gren. et Godr.*

Grenier et Godron fl. de Fr. III. p. 187.

Perigon. 6-partitum laciniis a. b. liberis patulis, caducis v. subpersistentib. Stamina basi divisionum perigonii inserta; filamenta aeq. et subulata; anther. dorsofixae. Caps. obovato-trigonae, triloculares, loculis 1-plurispermis; semina subglob. rhaphe non prominente exstructa, et b. tuberculo arilliformi, ex funiculo exorto, circumcincta.

1. ADENOSCILLA BIFOLIA Gren. et Godr.
Scilla bifolia L. sp. 443; DC. fl. fr. 3 p. 212 etc.
In collib., fruticetis, silvis densis Galliae occ. septemtr. et centr.; in regionib. Galliae mediterraneae planta adhuc non est reperta.

XV. URGINIA *Steinh.*, *Nees*, *Endl.*

(Knth. en. IV. 331.)

Icones addendae.

URGINIA MARITIMA (*Scilla*) Steinh. — A. Berg, Med. Pfl. tab. 122.
URGINIA INDICA Kunth. — Wight Ic. tab. 2063.
URGINIA COROMANDELIANA R. W. — (*Scilla Coromandel.?* Roxb. ?) — Wight Ic. tab. 2064, dextra.
URGINIA CONGESTA R. W. — Wight Ic. tab. 2065 sinistra.

XVIII a. FOXIA *Parl.*

Parlatore nuovi generi et specie di piante monocotyled. 1854. p. 17.

Hyacinthi spec. Smith; Lindl. bot. reg. tab. 1869. — Strangweja Bert. nelle memor. della Soc. Ital. 1835. (Walp. Ann. I. 855. n. 4). — Puschkiniae spec. ? Kunth en. IV. p. 338 et 680.

Perig. corollinum, campanulatum, 6-fidum, laciniis subaequalib., ap. recurvis. Stam. 6, perigonii fauce inserta, aequalia. Filam. perigonio b. adnata, dein inter se connata coronam fere simulantia et pistillum obtegentia, reliqua parte libera et ap. tridentata, dente medio longiore tantum antherifero. Anth. ovatae, b. cordato-bilobae, ibique affixaé, ap. emarginato-bilobae, introrsae, biloculares, secund. longitudinem dehiscentes. Pollen elliptic. utrinque obtusum, laeviusculum. Ovar. sessile, ovatum, obtuse trigonum, obsolete 6-sulcatum. Ovula plurima oblonga, in loculor. angulo centrali seriata, horizontalia, anatropa. Stylus breviusculus, subtrigonus, leviter sexsulcatus, sulcis tribus profundiorib. Stigma simplex, obtusiusculum, ap. papillosum. Caps. membranacea, subovata, triquetra, trilocularis, loculicide trivalvis. Semina in loculis pauca, ovato-subglobosa, testa nigra subangulata, hilo minuto concolore. Embryo albumine subcartilagineo brevior, subcurvatus, extremitate radiculari hilum attingente.

Genus dicatum in honorem Fox-Strangways. — Affinis Puschkinia scylloides.

1. FOXIA SPICATA Parl. l. c.

Hyacinthus spicatus Smith. — *Strangweja hyacinthoides* Bert. l. c. — *Puschkinia? dubia* Kunth en. pl. IV. 338 et 680.

Hab. Isola Zante, Graecia pr. Lepsina, pr. Argos caet. Floret Febr. et Mart., perennis.

XIX a. DRIMIOPSIS *Paxt.*

1. DRIMIOPSIS MACULATA Paxt. nov. gen. — Paxton fl. gard. II. n. 343. xylogr. f. 172.

Perianth. herbaceum campanulatum subaequale. Stam. aequalia, epipetala. Ovar. in styl. attenuatum; ovula gemina, collateralia.

Herbae bulbosae, f. succulentis, scapo racemoso, coma destituto. — Planta bulbosa, haud pulchra, Capensis. Fl. virides et albidi. — A societate Hortic. introducta.

XVI. LEDEBOURIA *Roth*; *Endl.*

(Knth. en. IV. 335.)

Icon addenda.

LEDEBOURIA HYACINTHINA Roth (Knth. l. c.) — Wight Ic. tab. 2040.

XVII. BARNARDIA *Lindl. Endl.*
(Knth. en. IV. 336.)

Icon addenda.

BARNARDIA INDICA R. W. — Wight Ic. tab. 2041.

XXIII. MYOGALUM *Lnk.*
(Walp. Ann. I. 857. — Knth. en. IV. 347.)

1. MYOGALUM AFFINE C. Koch et Bouché in app. ind. sem. h. Berol. 1855.
Ornithogalum affine Hort. Berol.

Glaucescens; folia linea alba media vittata, canaliculata, 10—14 nervia; flores undique directi, pedicello horizontali, postremum recurvo insidentes; sepala viridia, late albo-marginata, postremo patentissima, defiorata conniventia; filamenta latissima, apice bidentata, alterna triente parte breviora.

Proxime ad M. nutans Lk. accedit, sed 10—14 dies serius floret. Speciei, quam nunc dixi, sunt praeterea folia 8—10 nervia et flores dilute virescentes, majores, postremo secundi. M. Bouchéanum Kth. differt foliis latioribus, viridibus, 23—26 nerviis; M. Thirkeanum C. K. contra (Ornithogalum praesandrum Gris.) foliis angustioribus, pedunculis gracilioribus, floribus rarioribus et filamentis staminum breviorum lanceolatis nec bidentatis. — Folia glaucescentia, denique humifusa, linearia, 5 lin. lata, priora duplo latiora, semper canaliculata, scapum aequantia; scapus erectus, teres, glauco-pruinosus, multiflorus; bracteae hyalinae, 7 nerviae, pollicem et plus longae, lanceolatae, amplectentes; pedicelli 4 lin. longi; perigonium brevissime campanulatum, postremo patentissimum, defloratum contra connivens; sepala 9—10 lin. longa, 3 lin. lata, supra pallidiora, medio recurvata, oblongo-lanceolata; filamenta omnia latissima, apice bidentata, dentibus staminum majorum antheras superantibus, minorum contra ab iis superatis, sepalis paene duplo breviora; germen subconicum, pallide virescens, sulcis 6 obscure viridibus instructum; stylus trigonus, albus, cum germine paulo longiore stamina longiora adaequans.

XXIV. ORNITHOGALUM *Linn.*
(Walp. Ann. III. 633. — Knth. en. IV. 349 et 683.)

1. ORNITHOGALUM RUTHENICUM P. C. Bouché in Kth. en. pl. IV. — Koch ind. sem. h. Berol. 1855. — Species vix ab O. umbellato L. diversa est pedicellis adscendentibus et capsulis obtuso- nec acuto-angulatis. Folia plura, superne concava, apice mox arida, linearia, 3—4 lin. lata, scapum subaequantia aut eo longiora, medio stria alba longitudinali lineam lata instructa, glaberrima; scapus leviter pruinosus, apice floribus 7—9 corymbosus; pedunculi adscendentes; petala albida, medio viridia, oblonga, exteriora apice emarginata et apiculo obtuso brevissimo instructa, filamentis latiusculis duplo longiora; germen hexagonum.

2. ORNITHOGALUM PATER-FAMILIAS Godr. not. fl. Montp. 27. — Godr. et Gren. fl. de Fr. III, 190. — Flores graciliter pedunculati, pedunc. 3—5 centim., primum patenti-erecti inaequales, recti, asperi, tum refracti et ap. recurvi ad fructus resurgentes, bracteae albae, scariosae, lanc-lin., acuminatae, inferiores pedunculum longitudine fere aequantes, superiores eum superantes, omnes in statu fructificationis pedunculo breviores. Perig. divisiones lanc-oblongae 16—20 millim. Caps. ovoidea (10—12 millim. long., 7—8 l.) costis prominentib. 6, binis approximatis. Sem. atra subglobose-angulosa, rugosa. F. erecta, caulem superantia glabra, lin. (3—4 millim. lata), canaliculata, concoloria. Caulis 1—2 decim. Bulbus glob., tunicis membranac. munitus, bulbillos numerosissimos ovoideos fibrillosos pro parte tunicis inclusos, pro parte extra tunicas enatos, prodiens. Plerique bulbilli ap. folium erectum filiforme procreantes. — Hab.: In salinis de Cette (Godr.) Marseille. ♃. Maj.

3. ORNITHOGALUM ECKLONI hort. Hal. — v. Schlechtend. in Linn. XXV. p. 177. — Per annor. seriem haec species in horto Halensi illo sub nomine colitur; auctor ignotus, nec nomen reperiundum. — Bulbus depresso-globosus diam. transversali 1½ pollic. majorive, ext. tunicis sordide albicantib. tectus, viridib. stratis internis leviter perlucentibus. F. 6—7 c. caulib. 2—3 ex eodem bulbo prodeuntia ad 1½ ped. longa, a b. latiore, 6—7 lin. lata, sens. usq. ad ap. fere subulato-attenuata, ext. convexa laevia glabra; int. concava, hac concavitate sensim c. folio decrescente in ap. f. canaliculum angustum efficiente, marg. angustissimo, albido membranaceo cincta, nervis plurib. percursa, qui intensius virides margines versus in folio luci obverso facile in conspectum veniunt, dum pars media folii enervis apparet, viridia sunt et pruina fiunt glaucescentia. Caulis florifer folia longitudine aequat, teres laevis glaber eodem modo pruinoso-glaucus; racemum fert denique ½ pede longiorem, fl. circ. 30, pedicell. brevib. dein bilinearib. insidentes erecto-patulis. Bractea e b. latiore mox attenuata angusta, albo-hyalina medio et ap. viridis, dein fuscescens, pedicello suo aliquantulum longior. Fl. 3 lin. longus. Perig. phylla 6 inter se aequalia elliptica obtusiuscula, ap. levissime cucullata et toto ap. papillis albidis glandulosis obsita, lactea, dorso medio paulo infra med. ad ap. usque viridi, nervis in hac viridi parte nisi in b. ejus aliquantulum conspicuis. Stam. et pistillum fere aequilonga, phyllis paululum breviora. Filam. complanata, b. latiora, dein a medio circiter contracta, ap. fere subulata, alba laevia, glabra, interiora vix latiora. Ovar. profunde 3-sulcum, stylus albus obtuse trigonus et trisulcus ap. leviter attenuatus stigmate terminali convexulo e papillis albidis. Post anthesin phylla dense pistillum includunt, pedicelli eriguntur et flores cauli adprimuntur, simulque phylla colorem rubro-fuscum pro viridi in dorso induunt. — Capsula matura perigonio persist. appresso duplo longior, membranacea (immatura viridis subcarnoso-coriacea) septicide trivalvis, dissepimentis ab invicem non plane solutis sed interiore marg. excepta supera tertia circ. parte cohaerentib., caeterum solutis, valvulis dorso tenuiter et remote transverse rugosis ap. brevi spatio loculicidis, lob. terminalib. obtusis. Semina atra opaca (haud nitentia) trigona, latere extero curvato tenui orbiculari rugoso, lateribus planis.

4. ORNITHOGALUM CYDNI Schott et Kotschy. — Schott Oestr. bot. W. Bl. 1854. p. 153. — F. subquinis erecto-patentib. (subsigmoideo-curvatis), profunde canaliculatis, oblanc-linearib., obtusis, utrinq. sulcato-striatis, glaucis, marg. glabris; infl. scapo subnullo abbreviata, foliis breviore; bracteis lanceolato-linearib. pedicello in flore arrecto, tand. refracto, longiorib.; perig. expanso vix ultrapollicari; sep. exteriorib. oblanc-linearib., vix ¼ pollic. latis, ap. rotundato-obtusato perbrevissime apiculatis, anguste albo-marginatis (externe); interiorib. lin-oblongis, paullo angustiorib., breviorib. ap. rotundato-obtusis, non apiculatis, margine albo lato (externe) cinctis, omnib. externe disco laete viridi laevi, interne albo ornatis; staminib. ½ longitudine sepalor.; filam. erectis, post foecundationem recurvulis, inferne dilatatis, exteriorib. inferne lanc. paulo breviorib. (ut in reliquis specieb. observatis, tardius antheras aperientib.), interiorib. ad ⅔ oblongis, antheris praecociorib.; ovario hexaedro, acieb. valde prominulis, ap. quasi truncato, stylo ovario breviore, inferne flavescente. — Hab. in alpestrib. Ciliciae ad fontes Cydni (Kotschy).

5. ORNITHOGALUM SORORIUM Schott et Kotschy — Schott Oestr. b. W. Bl. 1854. p. 105. — F. canaliculatis, glaucidulis tandem patentissimis, lin-lanceolato-linguiformib., ap. versus subsensim angustatis, acutiusculis, utrinq. laevib. enerviis, marg. glabris; florum rhachi inter folia sessili, bracteis lanc-acuminatis, striato-nervosis; pedicellis bractea breviorib. arrectis, sepalis sulcato-lineolatis, exteriorib. elliptico-linearib., intus 5—7 striatis, interiorib. lanc-linearib., paulo angustiorib. brevioribusq. ex-apiculatis, intus sub 5-striatis; filamentis exteriorib. lanc., interiorib. ovato-lanc. sublongiorib. (praecocioribus!) ovariis hexaedris, aciebus valde prominulis. — Hab. in Tauro Ciliciae (Kotschy). — F. subquina etc., cfr. l. c. descr. plantae ampliorem.

6. ORNITHOGALUM AEMULUM Schott et Kotschy. — Oestr. bot. W. Bl. 1854. p. 161.

— F. binis lanc-linearib., acutatis, canaliculatis, erectis, supra laeviusculis, glaucis, infra obs. striatis, viridibus, marg. glabris; infl. racemosa, scapo brevi saepe subnullo, rhachi 2—3 pollicari, fl. remotis, pedunculis bractea duplo longiorib. patentissimis demum declinatis; sepalis inaequalib., intus disco sulcato-striatis (albis), exteriorib. oblanceolatis, brevit. apiculatis, anguste marginatis, interiorib. ex obovato oblanceolatis, bas. versus magis angustatis, late marginatis; filamentis inaequalib. dimidia sepali magnitudine, exteriorib. inferne late obovatis subrepentino in subulam lanc-linearem ½ breviorem angustatis, interiorib. inferne oblongule linearib., priorib. duplo angustiorib., subsensim in ap. subulatum attenuatis; antheris pallidissime flaventib. (interior. staminum praecocioribus!), polline flavo; ovarium pyriforme hexaedrum, acieb. valde prominulis, ap. arcuatim convergentibus; stylo ovario paulo breviore, ad apices staminum producto. — Habit. in Olympo Bithyniae.

7. ORNITHOGALUM RUDOLPHI Jacq. (Kth. en. pl. IV. 367). — v. Schlechtend. in Linnaea XXV. p. 176. — Cfr. l. c. pl. descript.

Icon addenda.

ORNITHOGALUM AUREUM Curt. — Endl. hort. Vindob. tab. V.

XXIV a. CARUELIA *Parl.*

Parlatore generi nuovi e specie di piante monocotyled. 1854. p. 21.

Ornithogali spec. Linn. sp. pl. p. 441 et auctor.

Perigonium corollinum, campanulatum persistens, hexaphyllum, phyllis ima b. vix connatis, subaequalib., concavis, exteriorib. carinatis. Stam. 6, perigonii phyllis ima b. inserta. Filam. complanata, subulata. Antherae lin., longae, ap. subbilobae, b. bifidae, introrsae, medio dorsi affixae. Pollen ellipticum utrinque acutiusculum, laeve. Ovar. liberum sessile obovato-conicum subrotundum, ap. planiusculum, 6-sulcatum, 3-loculare. Ovula in loculis plurima, obovato-subglobosa, 4-seriata, horizontalia, anatropa. Stylus filiformis, subteres sulcatus, erectus. Stigma obsolete trilobum, papillosum. Capsulam maturam non vidi.

Dicavi genus illud amico meo Sign. Teodoro Caruel botanico bene merito.

1. CARUELIA ARABICA Parl. l. c.

Ornithogalum arabicum Linn. (Kunth en. IV. p. 353. 683.)

XXV. ALBUCA *Linn. Endl.*

(Knth. en. IV. 372.)

1. ALBUCA? GARDENI Hook. — Hook. bot. mag. tab. 4842.

Acaulis bulbosa stolonifera glabra, bulbis squamosis, squamis 4—5 amplis latis laxis, f. 3—5 lato-lanc. inferne attenuatis b. dilatatis obsolete striatis, scapo simplici foliis breviore bracteato, racemo ovato erecto plurifloro, pedicellis strictis b. bracteatis, sep. (albis) oblongis patentib. usq. ad b. liberis, filamentis subulatis omnib. antheriferis, antheris oblongis.

Hab. in Africa australi Natal, (Capt. Garden introduxit in hortos 1854).

XXVI. UROPETALUM *Gawl.*

(Walp. Ann. III. 634. — Knth. IV. 377.)

1. UROPETALUM UNICOLOR — J. E. Stocks in Hook. j. Kew gard. misc. IV. 180.

F. linearib. canaliculat. glaucesc. glabr. scapum subaequantib., racemo nutante 4—6 fl., bract. striat. ovato-acuminat. pedunc. floriferum dimid. superantib., pedunc. floriferis horizontal. v. nutantib., fructiferis erectis, perigonii foliaceo-viridis cylindrico-campanulati sepalis linearib. obtus.,

exteriorib. ad dimid. interiorib. ad tert. part. et leviter recurvatis, stylo ovarium aequante, stigmate inconspic. obt., trilobo, caps. polysp., depressa profunde trigastra, vix stipitata vertice truncata b. nunc attenuata nunc truncata.

H. in collibus, Scinde et Beloochistan infer.; fl. temp. pluv. — Bulbilli ab indigenis eduntur. F. 6—8 p. Scap. 8—12 p. Flor. pedic. 2 l., fruct. pedic. 3—4 l. Bract. 2½ l. Fruct. 4 l. long. 3 l. l. Proxima U. serotino.

Tribus II. *ALLIEAE* Knth. en. IV. 379.

XXVII. ALLIUM *Linn.*

(Walp. Ann. III. 634. — Knth. en. IV. 379. 681.)

1. ALLIUM ORIENTALE Boiss. (Sect. *Molium*). — Boissier diagn. pl. n. XIII. p. 25.

A. bulbo ovato simplici tunicis subcoriaceis externis nigricantibus internis candidis vestito, scapo tereti crassiusculo usque ad quartam partem tantum foliorum vaginis tecto; foliis subternis glabris patulo-flexuosis recurvisve subundulatis planis canaliculato-plicatis oblongo-linearibus vel late linearibus acuminatis sub lente obscure denticulato-ciliolatis scapo brevioribus crassiusculis glaucescentibus, umbella multiflora capsulifera ob pedunculos inferiores decumbentes hemisphaerica, spatha membranacea candida persistenti multinervi tandem ob phyllorum lacerationem plerumque ad basin usque 4 phylla phyllis ovatis cucullatis acuminatis pedunculis aequilongis demum deflexis, pedunculis flore triplo longioribus, perigonii albidi vel pallide rubelli phyllis elliptico-linearibus obtusis nervo virenti percursis ad basin usque liberis, filamentis basi dilatata connatis inde ad apicem usque sensim attenuatis edentulis perigonio vix brevioribus, antheris lutescentibus, ovario capsulaque ovata perigonio subaequilonga laeviusculis.

Hab. in Oriente, Asia minori in Caria (Pinard), Sipylo monte (Aucher Nr. 2200) et Cilicia (Nr. 2188), monte Solyma Lyciae (Heldr.), in agris Syriae ad Aleppum Kotschy Nr. 71, in desertis Arabicis ad fines Palaestinae (Boiss.), in Mesopotamia (Aucher Nr. 2215). — Species characteribus habitu, umbellae et florum amplitudine valde affinis A. tulipaefolio Ledeb, decipienti Fisch. pro cujus forma eam diu habuimus sed differt foliis latioribus (4—6 lin.) A. tulipaefolium insuper habet spatham diphyllam obtusiusculam pedunculis dimidio breviorem, perigonii phylla basi longiuscule connata, ovarium tuberculato-scabriusculum.

2. ALLIUM LIBANI Boiss. in pl. Syr. exs. 1849 (Sect. *Molium*). — Boissier l. c. p. 26.

A. bulbo simplici tunicis exterioribus griseo-nigricantibus tenuibus interioribus pellucidis albidis vestito, scapo humili tereti fere ad apicem usque folioso, foliis glaucis crassiusculis glabris scapo longioribus lineari-lanceolatis planis acutis vel breviter attenuato-acuminatis expansis incurvis saepe circinnatis margine undulatis integerrimis, umbella multiflora capsulifera convexa, spatha membranacea alba persistenti pedunculos aequanti ultra medium irregulariter 2—4 loba lobis acutis, pedunculis crassiusculis rigidis flore sesquilongioribus sub eo incrassatis, perigonii albidi phyllis basi ad quartam partem usque longitudinis coalitis lanceolatis acutis nervo rubello percursis, filamentis usque ad perigonii divisionem cum eo et inter se coalitis triangulari-lanceolatis acutis perigonio dimidio brevioribus, antheris brevibus luteis, capsula ovata breviter rostrata perigonio vix breviori.

Hab. in arenosis summi jugi Libani Makmel dicti alt. 7000—8000'. Legi floriferum

Julio ineunte. — Scapus 2—3 pollicaris saepius ad $^{2}/_{3}$ longitudinis arena mobili sepultus. Limbus foliorum 2—4 pollicaris inferne 2—3 lineas latus. Flores illis A. tulipaefolii tertia parte majores. Perigonii phylla superne angustissima. Ex affinitate A. tulipaefolii et A. akakae Gmel. = latifolii Jaub. et Sp. Prius differt scapo elatiori, staminibus phylla perigonii oblonga aequantibus; posterius foliis brevibus latis, perigonii phyllis angustioribus basi breviter coalitis multo latius nervosis.

3. **ALLIUM PHILISTAEUM** Boiss. (Sect. *Molium*). — Boissier l. c. p. 26.

A. bulbis aggregatis, tunicis exterioribus coriaceis punctatis cinerascentibus interioribus membranaceis albidis, scapis pluribus teretibus crassiusculis tantum ima basi vaginatis, foliis viridibus erecto-patulis flexuosis anguste linearibus canaliculato-plicatis superne longe subulato-attenuatis scapo aequilongis brevioribusve margine remote ciliolatis caeterum glabris, umbella capsulifera multiflora convexa, spatha persistenti membranacea plurinervi sordide lutescenti monophylla pedunculis floriferis vix breviori ad medium usque vel inferius fissa saepius 3—4 lobata lobis abrupte et breviter acuminatis, pedunculis rigidiusculis flore sesquilongioribus fructiferis elongatis, perigonii e sicco straminei nitidi phyllis elongatis oblongo-lanceolatis basi breviter inter se coalitis apice attenuatis acutis obscure nervatis, filamentis a basi latiori inter se breviter et cum corolla coalitis sensim attenuatis perigonio subaequilongis, antheris luteis, capsula rotundato-subdepressa brevissime rostrata acute triangulata perigonio persistenti clauso plus dimidio breviori.

Hab. in Palaestinae collibus siccis et arenosis circa Gaza. Legi Apr. 1846. — Scapi floriferi 3—4 post anthesin 6—8 pollicares, folia inferne 2 lineas tantum lata. Flores magnitudinis eorum A. moly et A. rosei sed phylla perigonii angustiora 5—$5^{1}/_{2}$ lineas tantum longa. Ex affinitate A. chamaemoly et A. subvillosi a quibus characteribus datis facile distinguitur.

4. **ALLIUM PAPILLARE** Boiss. (Sect. *Molium*). — Boissier l. c. p. 27.

A. bulbo ovato-simplici tunicis exterioribus coriaceis fuscescentibus interioribus membranaceis vestito, scapis mediocribus ascendentibus teretibus crassiusculis glabris vix ad quartam partem usque vaginato-foliosis, foliorum vaginis papillis linearibus albis adpressis plerumque retrorsis dense pubescentibus, limbo erecto glabro canaliculato-plicato a basi lineari longissime et sensim subulato-acuminato margine integro scapo parum breviori, umbella capsulifera multiflora convexa pedunculis subaequalibus flexuosis flore duplo longioribus, spatha pedunculis aequilonga persistenti membranacea alba nervosa in 3—4 lobos in caudam setaceam eis saepe subaequilongam abrupte desinentes lacero-partita, perigonii albi phyllis ovalis obtusis obscure nervatis basi inter se longiuscule connatis, filamentis perigonio subaequilongis inter se et cum perigonio connatis a basi lata sensim attenuatis triangulari-lanceolatis, antheris luteis, capsula subrotundo-angulata perigonio subaequilonga.

Hab. in deserto ad meridiem Palaestinae inter Nochl et Gaza (Boiss.) Ineunte Aprili jam fere defloratum erat. — Scapi 6—8 pollicares, folia ad basin limbi $2^{1}/_{2}$ lineas circiter lata, flores magnitudinis eorum A. subvillosi Salzm.-vernalis Guss. cui ut et A. subhirsuto et A. hirsuto Zuccar. e Palaestina quoque oriundo affine est sed ab hisce omnibus facile distinguendum indole indumenti vaginarum non e pilis sed e papillis rigidis brevibus latiusculis constanti, foliis non planis sed canaliculatis longissime attenuatis, spathae lobis longius caudatis et praesertim perigonii phyllis brevibus obtusis nec acutis.

5. **ALLIUM CASSIUM** Boiss. (Sect. *Molium*). — Boissier diagn. l. c. p. 28.

A. bulbo ovato simplici tunicis exterioribus cinerascentibus punctatis interioribus albidis vestito, scapo tereti tenui flexuoso ad quartam vel quintam partem usque folioso, vaginis glabris vel parcissime et tenuiter puberulis, foliis angustissime linearibus planis plurinerviis margine integris glabris acutis flexuosis scapo vix brevioribus, umbella capsulifera 6—11 flora pedunculis gracilibus erecto-flexuosis flore 2—2½ plo longioribus, spatha membranacea pedunculis dimidio breviori alba persistenti deflexa unilateraliter fissa vel 2—4 loba lobis breviter acuminatis, perigonii primum albidi demum pallide rosei phyllis oblongo-ovatis obtusis fere ad basin usque liberis nervo medio saturatiori notatis, filamentis perigonio dimidia vel tertia parte brevioribus brevissime connatis a basi dilatata usque ad ⅔ longitudinis sensim angustatis tertia parte superiori subulatis, antheris luteis, capsula...

Hab. in lapidosis partis superioris montis Cassii Syriae borealis orientem versus (Boiss. Junio ineunte florere incipit. — Scapus 8—9 pollicaris, folia inferne sesquilineam tantum lata viridia, flores illis A. rosei vix minores. Hoc affine nostrae speciei ab ea differt scapo elato robustiori, foliis latioribus denticulato-scabridis, umbella multiflora, perigonii phyllis intense roseis minus obtusis concoloribus, filamentis a basi ad apicem sensim attenuatis perigonio vix quarta parte brevioribus. A. eriophyllum et A. Graecum phyllis perigonii acutis longius distant.

6. ALLIUM CARMELI Boiss. in pl. Syr. exs. 1847. (Sect. *Molium*). — Boissier diagn. l. c. p. 28.

A. bulbo ovato tunicis albidis crassiusculis opacis secus scapi basin in vaginas elongatas rubellas productis vestito, scapo crasso elato tereti rigido laevi medulla farcto ad quartam partem usque folioso, vaginis foliorum undique retrorsum pilis albis brevibus mollibus velutino-hirtis, foliis lato-linearibus planis elongatis scapo brevioribus superne longe et sensim attenuatis canaliculato-plicatis utrinque hirtis margine ciliatis, umbellae multiflorae globosae capsuliferae pedunculis subaequalibus flore subquadruplo longioribus, spatha monophylla in 4 lacinias ovato-ventricosas albido-membranaceas virescenti-nervosas apice attenuatas breviter setaceo-caudatas umbella paulo breviores demum deflexas fere ad basin usque partita, perigonii campanulati albi phyllis oblongis obtusis concavis subenerviis fere a basi liberis, filamentis vix coalitis a basi dilatata sursum attenuatis superne subulatis, antheris luteis brevissime exsertis

Hab. in rupestribus Carmeli ubi legi floriferum ineunte Maio. — Culmus 3—4 pedalis inferne penna anserina crassior, foliorum interiorum limbus 1½—2 pedalis basi 6—7 lineas latus. Umbella diametro 1½—2 pollicaris, flores magnitudinis et coloris eorum A. cepae. Species quoad affinitatem dubia; statura elata et umbella A. porri et A. multiflori sed stamina simplicia. Hoc Mollis ob spathae formam indumentumque foliorum adnumeravi sed ab eis differt scapo inferne folioso et perigonio campanulato nec patenti. Forsan melius in Sect. Scorodo collocandum.

7. ALLIUM ATROVIOLACEUM Boiss. Diagn. VII. var. *angustifolium*. — Boissier diagn. l. c. p. 29.

Minus elatum. Umbellae minores magnitudinis speciminum majorum A. Sphaerocephali. Folia 1½—2 lineas lata.

A. serrulatum Boiss. in Kotsch. pl. Pers. bor. Nr. 449.

Hab. prope Teheran (Kotschy), in Mesopotamia ad Bauerd; Kotschy pl. Mesop. Nr. 409.

8. ALLIUM RUBROVITTATUM Boiss. et Heldr. in pl. Cret. exs. 1847. (Sect. *Porrum*). — Boissier l. c. p. 29.

A. bulbo unico vaginis albis opacis vestito, scapo humili fere ad medium usque foliato tereti sub lente angulato-costato, foliis anguste

lineari-subulatis scapum plerumque superantibus semiteretibus superne canaliculatis non fistulosis inferne margine subserrulatis caeterum glabris viridibus flexuosis, umbella capsulifera parva densa capitato-globosa, spathae valvis binis albis opacis breviter acuminatis umbella triplo brevioribus, pedunculis externis brevissimis internis florem aequantibus vel eo sesquilongioribus, floribus mediocribus, perigonii phyllis a basi distinctis ovatis carinatis obtusiusculis dorso et margine aculeolato-scabridis ad carinam intense rubro-vittatis margine albidis, filamentis dilatatis apice rubellis internis tricuspidatis, cuspide antherifera lateralibus exsertis dimidio breviori filamento multoties breviori, capsula minuta ovato-rotunda perigonio paulo breviori.

Hab. in Creta, in saxosis faucis Kordaliotiko in Eparchia Agio Vasili (Heldr.) Floret ineunte Junio. — Scapi 2—3 pollicares, folia tenuia rigidula. Umbella magnitudinis avellanae minutae. Flores eis A. sphaerocephali paulo minores a quo scapo humili, foliis non fistulosis, pedunculis multo brevioribus, perigonii coloratione et dentium stamineorum proportione differt. Habitu magis affinis A. gomphrenoidi et A. Cilicio quae eisdem characteribus differunt et A. Reuteriano quod foliis crassioribus, perigonio roseo laevi, filamentis multo longius exsertis differt.

9. ALLIUM CALYPTRATUM Boiss. (Sect. *Porrum*). — Boissier diagn. nov. XIII. p. 30.

A. bulbo unico ovato tunicis fuscis apice in fibras longas laceras partem inferiorem scapi laxe vaginantes productis vestito, scapo tereti striato ad tertiam partem usque vaginato-folioso, foliorum limbo glabro viridi brevi plano-lineari acuto multinervi rigidulo margine sub lente scabridulo, umbellae laxiusculae 10—15 florae pedunculis inaequalibus flore 1—2½ plo longioribus, spatha membranacea rubra tenera calyptraeformi monophylla ovata in cuspidem ea sequilongiorem abrupte abeunti tandem floribus explicatis basi circumscissa saepeque lateraliter fissa decidua, spathellis partialibus albis laceris pedunculorum basin cingentibus, perigonii albidi phyllis oblongis fere a basi liberis carinatis obtusis carina scabrida apice prominenti obscure mucronulata, filamentis dilatatis interioribus tricuspidatis cuspide antherifera lateralibus triplo breviori subexserta filamento multoties breviori, antheris brunneo-luteis.

Hab. in regione alpina montis Cassii in consortio A. Cassii. Nondum floribus satis explicatis hanc plantam Junio ineunte legi. — Pedale. Fibrae e tunicis ortae secus scapum fere 2 pollices longae; foliorum limbus 1½—2 lineas latus 3—4 pollices longus Caricis folium referens. Flores magnitudinis eorum A. ampeloprasi. Spatha ampullacea in cuspidem 7—9 lineas longam abrupte desinens. Flores in speciminibus meis in charta explicatis albi. Species spathae forma insignis, indole tunicarum A. Baeticum referens, ab eo et ab A. arvensi petalis carina scabridis, cuspide antherifera brevissima foliisque planis distincta.

10. ALLIUM SINAITICUM Boiss. (Sect. *Porrum*). — Boissier l. c. p. 31.

A. bulbo ...., scapo humili ad medium usque foliato, foliis glabris viridibus angustis teretibus fistulosis apice attenuatis acutis scapo plus duplo longioribus, umbellae pauciflorae pedunculis subinaequalibus flore 2—3 plo longioribus, spatha alba membranacea plurinervi persistenti floribus expansis irregulariter rupta, perigonii albi phyllis oblongis obtusiusculis carina virentibus tota facie scabridulis, filamentis internis tricuspidatis cuspidibus subaequalibus filamento dimidio brevioribus antheris fuscescentibus exsertis.

Hab. in locis elatis deserti Sinaitici inter conventum et jugum Tihabi specimina pauca Aprili 1846 legi. — Scapi 4—5 pollicares, folia 6—8 pollices longa 1—1¼ lineas lata. Flores 5—8 magnitudinis eorum A. ampeloprasi et A. calyptrati cui affine est sed a quibus foliis, cuspidum staminum proportione distinguitur. Forskahleus in Flor. Aegypt. paucissimis verbis Allii speciem in desertis Kahirinis ei obviam et ab eo A.

desertorum nominatam describit quae ex antheris quae subulatae dicuntur et corolla albo-fuscescenti a planta hic descripta diversa esse videtur.

11. ALLIUM SCABRISCAPUM Boiss. in Kotschy pl. Pers. bor. 1847. (Sect. *Rhiziridеum*). — Boissier diagn. l. c. p. 31.

A. bulbis oblongis rhizomate tenui horizontali brevissimo conjunctis tunicis crassis fibrosis elongatim areolatis densissime obsitis inferne fibras tenuiter cylindricas longas numerosas edentibus, scapo erecto tereti, striato crassiusculo inferne tantum breviter folioso superne secus strias regulariter papillari-scabrido, foliis in fasciculos steriles tunica communi inclusos dispositis et secus scapi partem inferiorem sitis, vagina albida tubulosa virescenti-nervosa, limbo plano crassiusculo glaucescenti brevi margine serrulato-papillari lineari apice breviter angustato acutiusculo inferne usque ad vaginam longe attenuato, umbellae multiflorae capsuliferae globosae pedunculis aequalibus flore subtriplo brevioribus, spatha tenera membranacea albida obscure nervosa umbella dimidio breviori in 3—4 phylla obtusa demum deflexa lacero-partita, perigonii albi campanulati phyllis vix coalitis oblongis obtusis nervo medio pallide virenti percursis, filamentis a basi dilatata ad apicem usque sensim attenuatis perigonium subaequantibus, antheris fusco-luteis.

Hab. in saxosis montis Elbrus Persiae borealis prope pagum Passgala Kotschy l. c. Nr. 262. — Pedale vel sesquipedale. Folia 5—6 pollices longa circ. 3 lineas lata inferne valde attenuata. Umbella diametro circiter pollicaris, flores magnitudinis et coloris eorum A. Cepae. Ob rhizoma vix manifestum inter Rhiziridеum et Scorodon medium est. Radicis indole et toto habitu affine A. Tatarico foliis anguste linearibus scapoque laevibus, perigonii paulo majoris phyllis acutissimis distincto. Foliorum limbus inferne in petiolum angustatus quamdam affinitatem cum A. Victoriali quoque demonstrat.

12. ALLIUM MACRORRHIZUM Boiss. in Kotschy pl. Pers. bor. 1846. (Sect. *Rhiziridium*). — Boissier diagn. nov. XIII. p. 32.

A. bulbo subrhizomatoso tunicis fuscis coriaceis secus basin scaporum in lacinias laceras longe productis dense vestito longo crasso, parte inferiori fibras numerosas longas tenues cylindricas edenti, culmis teretibus striatis ad medium usque foliatis, foliis linearibus rigidulis laevibus glabris scapum subaequantibus infra canaliculatis supra planis, umbella globosa capsulifera pedunculis aequalibus flore subduplo longioribus, spathae valvis binis ovatis albis membranaceis umbella dimidio brevioribus cito laceris evanidisque, perigonii rosei phyllis oblongo-linearibus obtusiusculis basi inter se coalitis nervo saturatiori percursis, filamentis basi breviter coalitis dilatatis dein attenuatis superne subulatis rubellis perigonio sesquilongioribus edentulis, antheris rubellis.

Hab. in regionibus excelsioribus montis Demawend Persiae borealis Kotschy Nr. 610. Fl. Aug. — Radix 3—4 pollices longa pollicem diametro lata. Culmi 12—15 pollices longi, folia superne sesquilineam lata. Umbellae et flores similes eis A. stricti quod a nostra specie differt tunicis radicis tenuioris reticulato-fibrosis filamentis tribus basi utrinque unidentatis, foliis angustioribus. Affine quoque A. ochroleuco tunicis apice truncatis coloreque floris diverso.

Obs. A. vulcanicum Boiss. in Kotschy Pl. Pers. bor. exs. Nr. 49. ulteriori examini subjectum est tantum forma floribus majoribus A. rubelli MB.

13. ALLIUM FRIGIDUM Boiss. et Heldr. (Sect. *Codonoprasum*). — Boissier.

A. bulbo ovato tunicis externis membranaceis nigris secus scapi partem inferiorem plus minus productis internisque albis pellucidis vestito, scapo tenui humili ad medium usque 2—3 foliis instructo sicco striato, foliorum vaginis striatis, limbo subulato semicylindrico rigidiusculo flexuoso

obtuso scapo breviori, umbellae capsuliferae pauciflorae pedunculis subinaequalibus per anthesin flori aequilongis tandem elongatis, spathae phyllis binis e basi latiori attenuatis lanceolato-linearibus umbella vel brevioribus vel sublongioribus, perigonii breviter campanulati phyllis ovato-oblongis laevibus in vivo lutescentibus siccis stramineo-rubellis nervo dorsali rubello producto breviter mucronatis, filamentis basi longiuscule perigonio adnatis a basi latiori sensim attenuatis perigonium subaequantibus, capsula laevi breviter ovata trigona perigonio subbreviori.

Hab. in cacumine Taygeti orientem versus Heldr. pl. exs. 1845 sub A. montano Sibth. evulgatam. Alt. 6000—7500′. Huic quoque probaliter referenda sunt specimina incompleta e Tauro Ciliciae Kotschy pl. Taur. Nr. 497. — Scapus 4—5 pollicaris, folia tenuia, flores magnitudinis eorum A. carinati sed subbreviores. Ab omnibus formis A. pallentis statura, umbella 3—12 flora, perigonii phyllis acutiusculis mucronatis nec obtusis truncatis longe diversum. Magis affine A. Sipyleo Boiss. quod ab eo foliis crassioribus, pedunculis crassioribus longioribus valde inaequalibus perigonioque elongato cylindrico-campanulato tantum differt. A. montanum Sibth. Fl. gr. tab. 319 cujus tandem specimina e loco classico (Olympo Bithyniae) et iconi omnino conformia in Aucher Nr. 2207 vidi, differt a nostra specie tunicis bulbi coriaceis elevatim costato-nervosis.

14. ALLIUM CHLORANTHUM Boiss. (Sect. *Codonoprasum*). — *Boissier diagn.* l. c.

A. bulbo ovato simplici tunicis exterioribus nigricantibus corticosis interioribus membranaceis vestito, scapo flexuoso tereti ultra medium ramoso folioso, foliis subcylindricis fistulosis acutiusculis scapo subaequilongis, umbella multiflora capsulifera pedunculis parum inaequalibus flore $1\frac{1}{2}$—2 plo longioribus exterioribus deflexis, spathae valvis binis albo-membranaceis nervosis a basi oblonga longe caudato-acuminatis umbellam aequantibus aut ea $1\frac{1}{2}$—2 plo longioribus tandem deflexis, perigonii campanulati phyllis oblongis obtusissimis laevibus recentibus pallide luteolo-virentibus nervo viridi percursis exsiccatis luteolo-stramineis, filamentis basi inter se et cum perigonio connatis sinubus edentulis a basi sublatiori usque ad apicem paululum attenuatis, antheris breviter exsertis luteis, ovario hexagono sulcato tuberculato-oblongo, capsula trigona truncata vesiculoso-tuberculata perigonio sublongiori.

Hab. in monte Cassio Syriae borealis ubi Junio 1846 legi et unde bulbos retuli e quibus plantam vivam descripsi. — Species A. pallenti L. habitu, umbellae et florum magnitudine characteribusque proxime affinis sed ab ejus formis omnibus florum colore, ovario capsulaque eximie vesiculoso-tuberculatis nec laevibus facile distinguenda.

15. ALLIUM MODESTUM Boiss. (Sect. *Codonoprasum*). — Boissier diagn. l. c.

A. bulbo ovato tunicis albo-membranaceis vestito, scapo tereti humili ad medium usque folioso ante anthesin apice eximie flexo, foliis tenuibus semicylindricis superne canaliculatis inferne fistulosis scapum aequantibus vel superantibus cito emarcidis, umbella capsulifera submultiflora pedunculis tenuibus patulo-effusis inaequalibus flore 3—4 plo longioribus, spathae phyllis binis a basi subdilatata linearibus umbellae aequalibus vel ea duplo longioribus deflexis, perigonii elongati cylindrici phyllis oblongo-linearibus obtusiusculis laevibus vivis sordide albo-virentibus rubello-tinctis siccis rubellis, filamentis inferne inter se et perigonio adnatis e basi sublatiori attenuatis edentulis perigonio tertia parte brevioribus, antheris luteis, ovario ovato obtuse hexagono vesiculis oblongis obsolete punctato.

Hab. in desertis ad meridiem Palestinae Gazam versus ubi Aprili 1846 floridum legi et unde retuli bulbos quibus plantam educavi et descripsi. — Scapi 5—8 pollicares. Umbella 15—20 flora. Perigonium 3—$3\frac{1}{2}$ lineas longum. Inflorescentia diffusa et

habitus A. pulchelli Don. Ab eo et omni grege A. pallentis et A. carinati distinctissimum perigonio longiori cylindrico filamentis multo longiori. A. callimischo Kth. A. lepido et A. parcifloro perigonii forma magis accedit sed propter inflorescentiam diffusam, colorem florum, etc., cum eis non confundi potest.

Obs. 1. A. Pisidicum Boiss. et Heldr. pl. Anat. 1846 cum amicis. J. Gay in ann. Sc. Nat. Oct. 1847 cum A. Cupani Rafin. conjungimus.

2. Cl. Gay loco citato sub A. pulchello A. carinatum β. capsuliferum Koch et A. pulchellum Don verum conjunxit sed haec planta mihi a priori pedunculis longis effuse divaricatis, perigonio rotundato nec ovato, statura minori facile distinguenda esse videtur.

3. A. Olympicum Boiss. a cl. Gay ut synonymon A. pulchelli sui A. carinati β. capsuliferi citatum mihi semper species distincta esse videtur; praeter umbellae condensatae pedunculos subaequales, flores in eo semper saltem tertia parte minores sunt, tunicae radicales ultra scapi originem ut in eo nunquam productae sunt.

16. ALLIUM (*Mollium*) CYDNI Schott et Kotschy. — Schott in Oestr. bot. W. Bl. 1854. p. 217. — A. bifolium; foliis anguste linearibus sp. sens. angustatis, canaliculatis, antice glabris, postice subsulcato-lineolatis, patentissime puberulis (apic. vers. saepe calvis); scapo tereti inferne puberulo, foliis parvum longiore; spatha brevi late ovata, acuminata, trinervia, subscariosa; umbella pauciflora; pedunculis spatha triplo fere longioribus, gracilib.; sepalis albis pedunculo duplo brevioribus, ad bas. usque distinctis exteriorib. subovato-ellipticis, interiorib. angustius ellipticis, omnib. obtusis, patentissimis, nervo inferne virente, superne rubicundo percursis staminib. sepalis paulo brevioribus; filam. distinctis a b. dilatata lanceolato-triangularib., albis anth. luteis, ovario sphaeroideo-triquetro, flavo virente, (foveis trib. nectarib. majusculis aucto); stylo subulato albo, longit. staminum, stigmate simplici brevissime papilloso. — Fl. suaveolentes, diam. 7-lin. — Hab. in Tauro Ciliciae, in praeruptis vallis Cydni (Kotschy).

17. ALLIUM (*Molium*) OPIZII Wolfner. — Wolfner in Regensb. Fl. 1855. p. 433.

Scapo trigono, nudo, ad basin semper 1-phyllo; f. lin-lanceolato, plano subt. carinato glabro acutiusculo; spatha 1-phylla, umbella 1-flora capsulifera; petalis oblongis obtusiusculis staminib. triplo longioribus.

Bulbus ovato-rotundus, tunicatus, magn. nucis Avellanae. Scap. argute 3-gonus, debilis 1—1½ ped. viridis, vers. b. 1-phyllus. F. lin-lanceolatum planum subt. carinatum, acutiusculum, scapum aequans v. paulo superans (3—6''' lat.). Umbella 1-flora capsulifera. Caps. albae nitidae magnitud. pisi. Spatha 1-phylla membranacea. Pedicelli pollicares penduli. — Perigonium campanaeforme. Pet. oblongo-obtusiuscula, alba, linea media viridi carinata (3—5''' long. 2—2¼''' l.) Fil. teretiuscula, simplicia, b. subdilatata, perigonio ½ lin. adnexa. Anth. luteae. — Hab. Stern pr. Pragam. Fl. Majo. — Proximum A. pendulino Ten. sed diff. scapo ad b. semper 1-phyllo, umbella 1-flora.

18. ALLIUM LEHMANNIANUM Merckl. — Bunge in Al. Lehm. reliq. bot. p. 333.

A. (Porrum. Schult. § 2 c.) bulbo solitario ovato tunicato, caule subtriphyllo tereti glabro foliis glabris teretiusculis superne canaliculatis, umbella subfastigiata multiflora capsuligera, spatha integra bi- trifidave pedicellis breviore hyalina, perigonii laciniis ovato-lanc. acuminatis glaberrimis, staminib. alternis tricuspidatis inclusis, stylo lobos capsulae aequante.

Hab. in planitie argillacea inter fl. Kuwan et Syr-Darya caet. — Species habitu fere Allio *oreophilo* C. A. M. quodammodo similis, at fl. minoribus staminibusque diversissima, characteribus potius *A. sphaerocephalo* appropinquat, facillime tamen staminib. inclusis, statura humili, umbella laxa fastigiata dignoscitur. *A. caesium* quoque e diagnosi affine videtur sed diversum f. margine scabris, filamentorum lobis lateralibus abbreviatis. — Bulbus ovatus tunicatus, caet.

19. ALLIUM XANTHICUM (*xanthinum?*) Griseb. et Schenk. — Wiegmanns Arch. 1852. I. p. 358. — (*Allium Moly* Baumg., *A. tenuifolium* Schur, non Jord.)

(Scorodon). Bulbo elongato, tunicis in fibras solutis incluso, scapo basi foliato angulato, foliis plenis lin-filiformibus, nervis subtus prominulis, ligulis transversim truncatis, spatha univalvi subulato-costata, umbellam vix aequante, umbella tenui capsulifera, perigonio flavescente patente, segmentis elliptico-oblongis obtusiusculis, staminib. simplicib. perigonio duplo longioribus, alternis basi dilatatis.

Syn. *A. Moly* Baumg. *Fl.* transs.

Habitus A. saxatilis M. B. a quo bulbi tunicis a b. ad ap. in fibras tenues solutis spatha univalvi et fl. flavis differt; characterib. propius accedit ad A. ochroleucum Kit. sed scapus angustus, umbella tenuis, f. multo angustiora, spatha et bulbi vaginae recedunt. — Siebenbürgen, in reg. alpina pr. Fogarasch.

20. ALLIUM APPROXIMATUM Gren. et Godr. — Gren. et Godr. fl. de Fr. III. p. 200.
A. sphaerocephalon Bor. not. nov. 1853. p. 18, non L.

(*Porrum*). Ovar. ovoideum. F. laete viridia, cylindracea, paululum compressa, fistulosa, in pag. sup. tantum in ap. leviter sulcata.

Caetera ut in A. sphaerocephalon L. — Hab. Le Cher.; Angers.; ♃. Jun. Jul.

20. ALLIUM PRAESCISSUM Rchb. — Regel ind. sem. h. bot. Petrop. 1857. — Species bona nobis videtur corollis cylindricis elongatis quam illae A. paniculati L. et oleracei L. conspicue longioribus post anthesin etiam conniventibus nec apice ampliatis, staminibus alternis plerumque brevissimis distincta. — Nostra optime convenit cum ic. Rchb. et vix differt nisi interstitiis exacte rotundatis, quae in ic. cit. denticulis ad filamentorum basin minutis interjecta sunt. — A. praescissum Rchb. Ic. pl. crit. 5. p. 17. t. 429. Ic. fl. germ. 10. t. 489. f. 1066. Ledeb. Fl. ross. 4. p. 189. A. paniculatum α. legitimum Ledeb. l. c. p. 176 et herb. pro parte. — Bulbos misit Becker a regione Sareptana (Rch.)

21. ALLIUM NEAPOLITANUM Cyr. var. *latifolia*. — Jaub. et Spach ill. pl. or. V. t. 442. — A vulgatioribus formis Allii Neapolitani differt f. subtriplo latioribus (10—15 lineas latis) nec non floribus conspicue majoribus. — Ins. Chio leger. Oliv. et Brugiere (herb. m. Par.).

Icones addendae.

ALLIUM CASPIUM Bieb. (Kunth en. IV. 445). — Bot. mag. tab. 4598.
ALLIUM ACUMINATUM Hook. (Kunth en. IV. 4[illegible]). — Fl. d. serres VI. tab. 644; Lindl. in Paxt. fl. gard. I. 130. tab. 25 (hic imitata).

XXIX. NOTHOSCORDIUM *Knth.*

(Walp. Ann. III. 696. — Knth. en. IV. 457.)

1. NOTHOSCORDIUM PHILIPPIANUM C. Koch et C. Bouché ind. sem. h. Ber. 1858.

Bulbus globosus, fibris albis tenuibus crebris basi vestitus, tunica brunneo-grisea velatus; folia graminea, crassiuscula, planiuscule-canaliculata, linearia, scapo obsolete trigono elongato dimidio breviora, vix ultra lineam lata. Umbella 3—6 flora, spatha bi- quadrivalvi marcida multistriata, phyllis oblongo-lanceolatis. Sepala patula, alba, oblonga, acuta, dorso secus nervum medium brunnea vel interdum viridia, basi tantum connata. Stamina alterna vix breviora, basi latiora, dimidium perianthium attingentia, basi sepalorum inserta. Ovarium trigonum, sessile, stylo columnari duplo et ultra brevius; stigma obscurum; ovula in loculis quina, biserialia, campylotropa (cl. Endlicher generi Nothoscordii ovula amphitropa tribuit).

N. striato et striatello Kunth maxime accedit, siccum vix, vivum non aegre distinguendum scapo longiore et foliis angustioribus, non planis, sed canaliculatis. Beatus

Dr. Philippi e regionibus Chilensibus mari finitimis attulit. Genus Nothoscordii caeterum vix ab Allio separandum esse videtur. (C. K.)

2. NOTHOSCORDIUM STRICTUM Gay. — Gay Fl. Chilena VI. p. 114.

F. anguste linearib., umbella 9—11 flora; spathae valvis oblongo-ovatis aut oblongo-lanc., acuminatis, hyalino-membranaceis, pedicellis breviorib.; sep. oblongo-lanceolatis, obtusiusc., b. connatis, aequalib., filament. planis superne gradatim angustatis, ovario oblongo; stylo perigonio apicem subattingente.

Species en los Patos (Cordilleras de Ovalle), in alt. 3680 varas inventa.

XXXI. TRITELEIA *Dougl.*

(Walp. Ann. I. 865. — Knth. en. IV. 465.)

1. TRITELEIA POEPPIGIANA Gay. — Gay fl. Chilena VI. p. 117.

Virescens; f. linearib., planis, scapum 5—7 fl. quandoque superantib.; spathae 2 aut 3—4 valvis; valvis lanceolatis, hyalino-membranac., subroseis pedicellos aequantib. aut breviorib.; perig. 6-laciniato, laciniis oblong., obtusis, 4 l. long., $1\frac{1}{2}$ l. l.; tubo laciniarum longit.; stylo staminib. breviore; stigmatis lobis abbreviatis.

Speciem dedicamus illustrissimo Poeppig, viro de botanica Chilena optime merito.

Icon addenda.

TRITELEIA UNIFLORA Lindl. — (Knth. en. IV. p. 466). — Fl. d. serres IX. t. 967. p. 283.

XXXIII. BRODIEAEA *Sm.*

(Walp. Ann. III. — Knth. IV. 470.)

1. BRODIEAEA PARVIFLORA Torr. et Gr. — Torrey and Gray, Rep. of the bot. of the exped. of Gunnison and Beckwith. in 1854. (ed. 1857) p. 11.

Scapus rigidus, umbella multi- (15—20-) flora; pedicelli florib. breviores; stamina sterilia ovato-lanceolata, vix acuta; integra; ovarii loculi 6—8 ovulati.

Hab. Madelin Pass in m. Sierra Nevada Californiae. — Bulbus ovatus, nonnunquam diametro ultrapollicari, caet.

XXXIV. LEUCOCORYNE *Lindl. Endl.*

(Knth. en. IV. 472.)

1. LEUCOCORYNE PURPUREA Gay. — Gay Flora Chilena VI. p. 122. (atl. bot. Phanerog. tab. 69.)

Purpurea f. linearib., elongatis viridib.; perigonio hypocraterimorpho, regulari, limbo patente, 6-partito, fauce atro-purpurea; tubo cylindraceo, b. tumido; staminib. sterilib. crassis, acutis pedunculis inaequalibus.

En los lugares aridos de Coquimbo.

2. LEUCOCORYNE ANGUSTIPETALA Gay. — Gay fl. Chilena VI. p. 124.

Elongata, fl. subpurpuraceis, laciniis subpatulo-recurvatis, linearib., angustis, tubo aequalib.; staminib. sterilib. helvolis, linearib., b. paululum attenuatis, laciniar. longitudine; umbella 4-flora, pedunculis inaequalibus.

Species bene distincta et in provinc. centr. indigena.

XXXV. TRISTAGMA *Poepp.*

(Knth. IV. 474.)

1. TRISTAGMA DIMORPHOPETALA Gay. — Gay Flora Chilena VI. p. 126. — (Atl. bot. Phanerog. tab. 69 bis).

Foliis linearib., obtusis, carnosis, planis; umbella 5—6 flora, pedunc. inaequalib. strictis; spatha bivalvi, valvis oblongo-lanc., elongatis b. connatis; perig. 6-laciniato, laciniis tubo breviorib., diversis, exteriorib. membranaceis helvolis, interioribus crassis subviolaceis.

En los cerros aridos de Asquera cerca de Coquimba.

XXXIX. MILLA *Cav. Endl.*

(Knth. en. IV. 478.)

1. MILLA COERULEA Scheele. — Ad. Scheele in Linn. XXV. p. 260. — *Bulbus* globoso-ovatus tunicatus, tunicae membranaceae, reticulatae supra basin dein circumscissae, Vagina hyalina 1. scapumque b. involvens tubulosa integra et truncata sp. fissa. *F.* radicalia 4 erecta fistulosa, striata deorsum scabra sp. breviter subulata glaucescentia scapum excedentia. *Scapus* erectus fistulosus glaber furcatus et biflorus, rarius 1- v. 3-florus, ad bifurcationem bracteis 4—5 albescariosis instructus, bracteae 2 amplexicaules oppositae majores ovatae nervosae acuminatae pedunculum subaequantes spatham formantes, reliquae minores angustiores bracteoliformes e b. latiori lanceolato-subulatae. *Pedunculi* elongati erecti glabriusculi spatham aequantes v. superantes flore plerumque breviores. *Perigonium* corollaceum hypocraterimorphum glabrum coeruleum, tubus elongatus oblongo-campanulatus, limbus 6-partitus patentissimus, laciniae acutae zona dorsali-viridi 3-nervi notatae tubum subaequantes, 3 exteriores angustiores oblongo-lanc., 3 interiores ovato-oblongae. *Stamina* 6 monadelpha perigonii fauci inserta laciniis breviora. Filam. in coronam cylindraceam connata, pars libera subnulla. Antherae biloculares introrsae lineares erectae subsessiles. Ovarium obovatum liberum trigonum triloculare multiovulatum. Stylus cum ovario continuus filiformis elongatus. Stigma sp. pilis crassis brevibus albicantibus glandulosis densissime obsitum. Capsula... — Frequens in pascis aridis pr. Neubraunfels. Römer, m. Martio. — Milla biflora Cav. mihi ignota gaudet fl. albis, filamentorum parte superiori libera lineari et bracteolis 3 brevibus ad bifurcationem. — Planta $^1/_4$ pedalis, caet.

GENERA ALLIACEIS AFFINIA.

(Knth. en. IV. 478.)

TECOPHILA *Bertero.*

(Walp. Ann. III. 687.)

1. TECOPHILA VIOLAEFLORA Bert. — Gay Fl. Chilena VI. p. 36. — (Walp. Ann. III. p. 637. n. 1).

Syn. *Phygonthus vernus* Poepp. nov. gen. et spec. t. II. p. 71. tab. 200. — Poeppigia, Kunke in Reichb. p. 212.

XXXXII. MIERSIA *Lindl. Endl.*

(Knth. en. IV. 486.)

1. MIERSIA CHILENSIS Lindl. bot reg. — (Knth. en. IV, p. 486. Miersia major). — Gay fl. Chilena VI. p. 100. Atlas bot. Phanerog. tab. 68.

Fol. anguste linearib., obtusis subcarnosis, inferne semi-cylindricis, superne planiusculis; florib 5 l. longis; perigonio punctul. glandulosis scabrato, stylo incluso.

Pl. valde vulgaris in provincias centrales, Valparaiso, Concon, Aconcagua.

2. *MIERSIA MYOIDES* Bert. — Gay Fl. Chilena VI. p. 101.

Florib. 2 lin. longis; urceolo stamineo laevigato; stylo exserto.

M. myoides Bertero Merc. Chileno. — *M. minor* Knth. en. IV. p. 487.

Habit. Chili.

Tribus III. *ANTHERICEAE*. Endl.

Knth. en. IV. 492.

XXXIV. ALOE *Tournef.*

(Walp. Ann. I. 866. — Knth. en. IV. 492. 691.)

ALOARUM CONSPECTUS TABULA SYNOPTICA SECTIONUM.

Salm - Reifferscheid — Dyck monogr. generum Aloës et Mesembryanthemi, fasc. I—VI.

- ALOAE
  - Parviflorae
    - Limbo regulari .... APICRA Haw. .....
      - § 1. *Imbricatae.*
      - § 2. *Foliolosae.*
    - Limbo bilabiato .
      - revoluto ... HAWORTHIA Duval.
        - § 3. *Triquetrae.*
        - § 4. *Tortuosae.*
        - § 5. *Albicantes.*
        - § 6. *Margaritiferae.*
        - § 7. *Luridae.*
        - § 8. *Tessellatae.*
        - § 9. *Retusae.*
        - § 10. *Reticulatae.*
        - § 11. *Limpidae.*
        - § 12. *Setatae.*
        - § 13. *Loratae.*
      - patulo ..... BOWIEA Haw. ..... § 14. *Bowieae.*
  - Grandiflorae
    - Tubo recto
      - Segmentis exteriorib. plus minusve liberis ..
        - Stamina inclusa .. ALOE Haw. ....
          - § 15. *Echinatae.*
          - § 16. *Proliferae.*
          - § 17. *Rhodacanthae.*
          - § 18. *Submaculatae.*
          - § 19. *Paniculatae.*
          - § 20. *Serrulatae.*
          - § 21. *Microcanthae.*
          - § 22. *Purpurascentes.*
          - § 23. *Pictae.*
          - § 24. *Mitraeformes.*
          - § 25. *Fruticulosae.*
          - § 26. *Arborescentes.*
        - Stamina exserta .. PACHIDENDRON Haw. § 27. *Pachidendra.*
      - Segmentis exteriorib. ad ap. usque coalitis .... RHIPIDODENDRON W. § 28. *Rhipidodendra.*
    - Tubo curvato .... GASTERIA Duv. ..... § 29. *Gasteriae.*

Icones addendae ex Salm-Reifferscheid-Dyck monogr. gener. Aloës caet.

Tabb. fasciculi I.

Tab. 1. ALOE SPIRALIS Haw. (§ 1. fig. 5.)
2. ALOE FOLIOLOSA Haw. (§ 2. fig. 4.)
3. ALOE VISCOSA Lin. (§ 3. fig. 3.)
4. ALOE VISCOSA *indurata* S. Dyck. (§ 3. fig. 3 β.)
5. ALOE SUBTORTUOSA Schult. (§ 3. fig. 5.)
6. ALOE TORQUATA Haw. (§ 3. fig. 6.)
7. ALOE SUBRIGIDA Schult. (§ 4. fig. 1.)
8. ALOE RIGIDA DC. (§ 4. fig. 3.)
9. ALOE RIGIDA *expansa* S. Dyck. (§ 4. fig. 3. β.)
10. ALOE GRANATA *minor* S. Dyck. (§ 6. fig. 6. β.)
11. ALOE ATTENUATA *clariperla* S. Dyck. (§ 6. fig. 12. β.)

Tab. 12. ALOE REINWARDTI S. Dyck. (§ 6. fig. 16.)
13. ALOE COARCTATA Haw. (§ 6. fig. 17.)
14. ALOE SCABRA Haw. (§ 7. fig. 1.)
15. ALOE RECURVA Haw. (§ 7. fig. 3.)
16. ALOE TESSELLATA Haw. (§ 8. fig. 1.)
17. ALOE PARVA Haw. (§ 8. fig. 2.)
18. ALOE MIRABILIS Haw. (§ 9. fig. 1.)
19. ALOE ASPERULA Haw. (§ 9. fig. 2.)
20. ALOE ALTILINEA Haw. (§ 11. fig. 3.)
21. ALOE SETOSA Schult. (§ 12. fig. 3.)
22. ALOE CHLORACANTHA Haw. (§ 13. fig. 1.)
23. ALOE STENOPHYLLA Schult. (§ 13. fig. 2.)
24. ALOE BOWIEA Schult. (§ 14. fig. 1.)

Tabb. fasciculi II.

Tab. 1. ALOE IMBRICATA Haw. (§ 1. fig. 1.)
2. ALOE SPIRELLA Haw. (§. 1. fig. 3.)
3. ALOE SPIRELLA β. *quinquangularis* S. Dyck. (§. 1. fig. 3. β.)
4. ALOE PENTAGONA Haw. (§ 1. fig. 4.)
5. ALOE TORTUOSA Haw. (§ 4. fig. 2.)
6. ALOE TORTUOSA β. *major* S. Dyck. (§ 4. fig. 2. β.)
7. ALOE HYBRIDA S. Dyck. (§ 4. fig. 4.)
8. ALOE SEMIGLABRATA Haw. (§ 6. fig. 2.)
9. ALOE PAPILLOSA S. Dyck. (§ 6. fig. 4.)
10. ALOE GRANATA Willd. (§ 6. fig. 6.)
11. ALOE RUGOSA S. Dyck. (§ 6. fig. 9.)
12. ALOE SUBULATA S. Dyck. (§ 6. fig. 10.)
13. ALOE ATTENUATA Haw. (§ 6. fig. 12.)
14. ALOE FASCIATA Willd. (§ 6. fig. 15.)
15. ALOE FASCIATA β. *major* S. Dyck. (§ 6. fig. 15. β.)
16. ALOE RETUSA Lin. (§ 9. fig. 3.)
17. ALOE TURGIDA Haw. (§ 9. fig. 5.)
18. ALOE HUMILIS Haw. (§ 15. fig. 1.)
19. ALOE ECHINATA Willd. (§ 15. fig. 2.)
20. ALOE INCURVA Haw. (§ 15. fig. 3.)
21. ALOE LONGI-ARISTATA Schult. (§ 15. fig. 7.)
22. ALOE CILIARIS Haw. (§ 25. fig. 1.)

Tabb. fasciculi III.

Tab. 1. ALOE ASPERA Haw. (§ 2. fig. 2.)
2. ALOE CORDIFOLIA Haw. (§ 3. fig. 1.)
3. ALOE ASPERIUSCULA Haw. (§ 3. fig. 2.)
4. ALOE MARGARITIFERA Haw. (§ 6. fig. 5.)
5. ALOE RADULA Jacq. (§ 6. fig. 8.)
6. ALOE SUBATTENUATA S. Dyck. (§ 6. fig. 11.)
7. ALOE GLABRATA S. Dyck. (§ 6. fig. 13.)
8. ALOE SUBFASCIATA S. Dyck. (§ 6. fig. 14.)
9. ALOE RETICULATA Haw. (§ 10. fig. 1.)
10. ALOE ATROVIRENS DC. (§ 10. fig. 2.)
11. ALOE CYMBAEFOLIA Schrad. (§ 11. fig. 1.)
12. ALOE ARACHNOIDES Thunb. (§ 12. fig. 2.)
13. ALOE VIRENS Haw. (§ 15. fig. 8.)
14. ALOE SERRULATA Haw. (§ 20. fig. 1.)
15. ALOE VARIEGATA Lin. (§ 20. fig. 2.)
16. ALOE MICRACANTHA Haw. (§ 20. fig. 1.)

Tab. 17. ALOE TENUIOR Haw. (§ 25. fig. 3.)
18. ALOE MACULATA Thunb. (§ 29. fig. 1.)
19. ALOE PULCHRA Jacq. (§ 29. fig. 2.)
20. ALOE NIGRICANS Haw. (§ 29. fig. 7.)
21. ALOE BRACHYPHYLLA S. Dyck. (§ 29. fig. 8.)

Tabb. fasciculi IV.

Tab. 1. ALOE CONCINNA Haw. (§ 3. fig. 4.)
2. ALOE ERECTA Haw. (§ 6. fig. 7.)
3. ALOE LAETEVIRENS Haw. (§ 10. fig. 3.)
4. ALOE ALTILINEA *denticulata* S. Dyck. (§ 11. fig. 3. β.)
5. ALOE TRANSLUCENS Haw. (§ 12. fig. 1.)
6. ALOE ABYSSINICA Lam. (§ 18. fig. 1.)
7. ALOE SOCCOTRINA Lam. (§ 22. fig. 1.)
8. ALOE PURPURASCENS Haw. (§ 22. fig. 2.)
9. ALOE SPINULOSA S. Dyck. (§ 24. fig. 6.)
10. ALOE FEROX Lam. (§ 27. fig. 5.)
11. ALOE BAYFIELDII S. Dyck. (§ 29. fig. 14.)
12. ALOE ELONGATA S. Dyck. (§ 29. fig. 15.)
13. ALOE DECIPIENS Haw. (§ 29. fig. 16.)
14. ALOE NITIDA S. Dyck. (§ 29. fig. 17.)
15. ALOE TRIGONA S. Dyck. (§ 29. fig. 18.)
16. ALOE INTERMEDIA Haw. (§ 29. fig. 24.)
17. ALOE VERRUCOSA Mill. (§ 29. fig. 25.)
18. ALOE SCABERRIMA S. Dyck. (§ 29. fig. 26.)
19. ALOE OBTUSIFOLIA S. Dyck. (§ 29. fig. 37.)
20. ALOE MOLLIS Haw. (§ 29. fig. 38.)

Tabb. fasciculi V.

Tab. 1. ALOE GLABRATA β. *perviridis* S. Dyck. (§ 6. fig. 13. β.)
2. ALOE GLABRATA γ. *concolor* S. Dyck. (§ 6. fig. 13. γ.)
3. ALOE PLANIFOLIA Haw. (§ 11. fig. 2.)
4. ALOE VULGARIS Bauh. (§ 18. fig. 2.)
5. ALOE ECKLONIS S. Dyck. (§ 21. fig. 2.)
6. ALOE ARBORESCENS Mill. (§ 26. fig. 3.)
7. ALOE SALM-DYCKIANA Schult. (§ 27. fig. 1.)
8. ALOE PLICATILIS Mill. (§ 28. fig. 1.)
9. ALOE BOWIEANA Schult. (§ 29. fig. 3.)
10. ALOE VITTATA Schult. (§ 29. fig. 6.)
11. ALOE GUTTATA S. Dyck. (§ 29. fig. 9.)
12. ALOE SUBNIGRICANS Spreng. (§ 29. fig. 10.)
13. ALOE GLABRA Haw. (§ 29. fig. 19.)
14. ALOE SUBCARINATA S. Dyck. (§ 29. fig. 21.)
15. ALOE EXCAVATA Willd. (§ 29. fig. 22.)
16. ALOE ANGULATA Willd. (§ 29. fig. 29.)
17. ALOE ANGUSTIFOLIA Haw. (§ 29. fig. 30.)
18. ALOE CONSPURCATA S. Dyck. (§ 29. fig. 31.)
19. ALOE LINGUA Willd. (§ 29. fig. 33.)

Tabb. fasciculi VI.

Tab. 1. ALOE CONGESTA S. Dyck. (§ 2. fig. 1.)
2. ALOE ALBICANS Haw. (§ 5. fig. 1.)
3. ALOE SUBALBICANS S. Dyck. (§ 6. fig. 1.)
4. ALOE DEPRESSA Haw. (§ 16. fig. 3.)
5. ALOE PICTA Thunb. (§ 23. fig. 2.)

6. ALOE LATIFOLIA Haw. (§ 28. fig. 3.)
7. ALOE GRANDIDENTATA S. Dyck. (§ 28. fig. 4.)
8. ALOE DISTANS Haw. (§ 24. fig. 1.)
9. ALOE XANTHACANTHA Willd. (§ 24. fig. 3.)
10. ALOE MITRAEFORMIS Willd. (§ 24 fig. 4.)
11. ALOE MICROSTIGMA S. Dyck. (§ 26. fig. 4.)
12. ALOE ACINACIFOLIA Jacq. (§ 29. fig. 11.)
13. ALOE CANDICANS Haw. (§ 29. fig. 18.)
14. ALOE CARINATA Mill. (§ 29. fig. 20.)

XXXVI. KNIPHOFIA *Mnch.*

(Walp. Ann. III. 688. — Knth. IV. 550.)

1. KNIPHOFIA UVARIA Hook. — Hook. bot. mag. 1854. tab. 4816.

F. longissimis acuminatissimis profunde carinatis subglaucis margine carinaque praecipue minute cartilagineo-serrulatis, spica ampla ovato-cylindracea post anthes. inferne insigniter contracta, fl. densissimis deflexis infundibuliformib. limbi lobis modice patentib., staminib. exsertis.

K. aloides, Mönch in Kunth en. pl. IV. p. 551. c. synon. Aloe Africana etc. Commelyn. hort. Med. Amst. II. 29. t. 15. „Iris Uvaria promontorii Bonae spec. Stap. Teophr. p. 385". Cap. bonae spec. — F. dense caespitosa, 3—4 ped. Scapus 2—4 ped. fl. laete purpureis etc.

2. KNIPHOFIA SARMENTOSA Knth. en. IV. p. 552. — (Aletris farinosa hort. quorund.) — v. Schlechtdl. in Linnaea 1854 p. 482, cfr. l. c. plantae descr. amplam.

XXXVI a. TRITOMA *Gawl.*

(Knth. IV. 550. sub Kniphofia Mnch.)

1. TRITOMA ROOPERI Moore. — In the gard. compan. p. 118. c. tab. l. c.

F. longissimis, recurvatis, carinatis, in apicem longissimum attenuatis, supra minute cartilagineo-serrulatis, spicis rotundato-ovatis; fl. subsessilib. in axillis bractearum oblongo-obovatarum dense coarctatis, bract. obtusis 3—5 nerviis, superiorib. acutis acuminatisve, 1—3 nerviis glanduloso-serratis, comam supra flores evolutos formantibus; staminib. inclusis.

Planta a Rooper (captain) e ditione Africana dicta Kaffraria in hortos introducta.
Kniphofia Rooperi Lemaire Jard. fleur. IV. tab. 362. — (Icon e Gardn. comp. hic iterata.)

EREMURUS *M. Bieberst.*

(Walp. Ann. I. 866. — Knth. en. IV. 553.)

Icon addenda.

EREMURUS SPECTABILIS Bieberst. (Knth. en. IV. p. 554.) — Hook. bot. mag. t. 4870.

L. ASPHODELUS *L.*

(Walp. Ann. III. 638. — Knth. en. IV. 554. 689.)

1. ASPHODELUS REFRACTUS Boiss. in pl. Syr. exs. 1847. — Boiss. l. c. p. 23.

A. annuus, radice simplici brevi in fibras abeunti, foliis omnibus radicalibus lineari-subcylindricis compressis laevissimis parte inferiori viscidulis basi membranaceis dilatatis parte superiori attenuatis acutis, scapis 1—3 lateralibus ascendentibus incurvis teretibus laevibus folia multo superantibus infra medium semel bisve dichotome ramosis, racemis longis laxis, pedunculis viscidulis bractea albo scariosa ovata

abrupte mucronulata suffultis paulo supra basin articulatis superne clavato-incrassatis floriferis erectis flore sesquilongioribus fructiferis refractis capsula 2—3 plo longioribus, floribus parvis, perigonii phyllis oblongis albidis nervo medio valido obscuriori percursis, filamentis perigonio paulo brevioribus dilatatis basi apiceque attenuatis, capsula rotundato-trigona transverse sulcata, seminibus griseo-albidis acute trigonis dorso transverse sulcatis facie planis non foveolatis.

Hab. in arenosis vallis Wadi Mokatteb jugi Sinaitici mixta cum Asph. clavato (Vide Diagn. 7. p. 119). Legi floriferum Marte 1846. — Folia 3—4 pollices longa inferne vix lineam unam lata. Scapi $1^1/_2$ pedales, racemi demum semipedales longioresque tenues laxe 10—16 flori. Pedunculi fructiferi eximie refracti 4—5 lineas longi. Flores illis A. clavati et fistulosi minores obconici vix 2 lineas longi. Capsula piso dimidio minor. Species ab A. fistuloso, clavato et viscidulo affinibus praeter notas datas statim pedunculis fructiferis elongatis curvatione partis non articulatae eximie refracto-pendulis notabilis. — A. viscidulum a me prius in Diagn. Nr. VII. ex speciminibus Schimperianis descriptum in planitie arenosa Ramleh dicta ad radices meridionales jugi el Tih in Arabia petrea Marte 1846 abunde florentem legi et eum praeter notas indicatas ab A. clavato scapo ascendenti, foliis non scabridis, capsula depressa, seminibus minoribus caesiis lateraliter non foveolatis valde distinctum esse observavi.

2. ASPHODELUS RIGIDIFOLIUS Boiss. et Heldr. in pl. Anat. exs. 1847. — Boissier diagn. XIII. p. 22.

A. perennis foliis omnibus radicalibus confertis numerosissimis lineari-subulatis rigidis quadrangulis subcompressis ad angulos scabridis acutis basi membranaceo-dilatatis glaucescentibus, scapo nudo folia superanti tereti a media parte ramoso paniculato rarius simplici, racemis terminalibus tenuibus laxiusculis, bracteis scariosis pellucidis albis nervo obscuro percursis a basi latiori triangulari subulato-acuminatis flores non aequantibus, pedunculis e bractea 1—4 erectis paulo supra basin articulatis sub anthesi brevibus postea elongatis perigonium dimidium aequantibus, perigonii albidi ante evolutionem longe et anguste tubulosi phyllis lineari-oblongis basi tantum connatis obtusis nervo saturatiori percursis, filamentis a basi dilatata sub lente minute scabrida sensim ad apicem usque attenuatis tribus perigonio quarta parte brevioribus, tribus aliis perigonio dimidio brevioribus apice struma globoso-triquetra in cuspidem brevem cui anthera inserta est producta instructis, antheris filamentorum strumosorum brevioribus, capsula immatura sicca globoso-subtrigona, seminibus acute trigonis sub lente punctatis dorso ruga una alterave instructis.

Hab. in collibus apricis Isauriae inter Koniah et Beychehr loco tribus leucis a priori urbe distanti (Heldr.). Fl. Junio ineunte. — Folia 6—7 pollices longa lineam dimidiam lata. Scapus cum racemis $1^1/_2$ pedalis, racemi 5—7 pollicares, perigonium clausum 7—8 lineas longum $^1/_2$ latum. Species pulchra collocanda prope A. Tauricum quod quoque staminibus alternatim strumosis gaudet sed longe differt caule folioso racemo denso thyrsoideo simplici compacto, bracteis dense confertis flores aequantibus vel superantibus.

3. ASPHODELUS DAMASCENUS Boiss. — Boissier diagn. XIII. p. 22.

A. perennis, foliis omnibus radicalibus confertis numerosissimis lineari-subtriquetris superne subulato-attenuatis pagina inferiori ad margines asperulis superiori laevibus, scapis elatis nudis folia superantibus in racemum simplicem longum laxiusculum abeuntibus, bracteis lanceolatis scariosis acuminatis pedunculos non multum superantibus, pedunculis ex eadem bractea aggregatis supra medium articulatis floriferis perigonium dimidium aequantibus fructiferis elongatis, perigonio albido

ante evolutionem tubuloso phyllis lineari-oblongis basi tantum connatis obtusis nervo lato obscuro percursis, filamentis inferne scabridulis e basi latiori sensim attenuatis tribus perigonio paulo brevioribus, tribus aliis perigonio dimidio brevioribus apice struma alato-trigona cuspidata instructis, antheris filamentorum strumosorum brevioribus, capsula (immatura) obovata rugosa, seminibus acute triquetris dorso rugosis sub lente punctatis.

Hab. in jugis humilioribus Antilibani in latere orientali ad Wadi-Barrada (Boiss.). Fl. Maio. — Folia 8—12 pollices longa inferne 1—2 lineas lata. Scapus cum racemo 2—3 pedalis, racemus fructifer saepe pedalis et ultra, perigonium 9—12 lineas longum. Affinis habitu et florum structura speciei praecedenti a qua foliis latioribus planioribus laeviusculis, racemo semper simplici crassiori, pedunculis longioribus ad medium articulatis, floribus paulo majoribus sat distincta videtur.

4. ASPHODELUS SPHAEROCARPUS Gren. et Godr. — Gren. et Godr. fl. Fr. III. p. 223. — Fl. densissimi compacto-racemosim dispositi, bract. lanceolatae, pedunculos erectos aequantes v. superantes, fere adpressae et ap. paulo gibbae. Perigon. circ. 18 millim.; stamina filamentis anguste lanc. et b. ciliatis. Caps. parv. (7 millim. diam.), valvis suborbicularib., ap. rotundatis, nervatura mediana non inflexa et marg. lateralib. reflexis apiculatis apparentib.; nervis dorsalib. vix nullis, costis transversalib. paulo eminentib. paucis (4—5), marginibus post dehiscentiam b. rima ovali, medio rima angustissima et ap. valde ringenti, discretis. Semina atra, reticulata. — F. lanceensiformia (10—12 millim. lata). Scapus circ. metralis, farctus, simplex, rarius ap. ramosus. Radix fasciculato-ramosa. — Hab. Bois de l'Hermitain, dans les Deux-Sèvres etc. — ♃. Maj. Jun.

5. ASPHODELUS SUBALPINUS Gren. et Godr. — Gren. et Godr. fl. de Fr. III. 224. — *A. Delphinensis* Gren. et Godr. mem. soc. émul. Doubs. may 1854; *A. ramosus* Lap. abr. 188; *A. neglectus* Roem. et Schl. syst. 7. p. 488? — Cfr. l. c. pl. descr.

Icones addendae.

ASPHODELUS PAUCIFLORUS R. W. — Wight Ic. tab. 2062.
ASPHODELUS LUTEUS Lin. — A. Berg Med. Pfl. tab. 120.

CHRYSOBACTRON *Hook.*

(Walp. Ann. I. p. 867.)

1. CHRYSOBACTRON HOOKERI. — Hook in bot. mag. tab. 4602.

F. lin-ligulatis acuminatis, racemis laxifloris, ovar. obovato, capsula b. in stipitem brevem suffulta.

Chr. Hookeri Colenso in litt.; Hook. Ic. pl. tab. 817. (specimen fructifer). — Patria Nova-Zeelandia.

2. CHRYSOBACTRON ROSSII Hook. f. (Walp. Ann. I. 867). — Decaisne bot. II. p. 17 ad d'Urvill. voy. au pôle Sud. etc. tab. 4. g.

Foliis late ensiformib.; scapis folia superantibus glabris, fl. racemosis aurantiacis.

Hab. in cacuminib. insulae Aucklandiae. — Veratrum Dubouzeti Hombron voy pol Sud, tab. 4. g. — Rhizoma horizontale seu perpendiculare, crassum carnosum, 0,m. 03 ad 0,m. 06 longum, pollicis humani et ultra diametr.; cfr. l. c. descr. ampl.

LVI. BLANDFORDIA *R. Br.*

(Walp. Ann. III. 639. — Knth. en. IV. 589.)

1. BLANDFORDIA FLAMMEA Hook. — Hook bot. mag. 1854. tab. 4819.

F. longissimis lin. sensim acuminatis glauco-virescentib. acute carinatis, marginib. carinaq. scabriusculis, scapo superne bracteato, racemis plurifl.,

inflorescentiae bract. subherbac. pedicello triplo breviorib., perianthio campanulato b. solummodo contracto, limbi lacin. interiorib. latiorib., staminib. perianthium aequantib.

Tritoma flammea Lindl. in journ. of hort. soc. V. p. 82. — Paxt. mag. of bot. I. p. 353. (c. icone).

Patria: Australia, Port Macquarrie, Hunters River; Wide Bay, et in vicinitate urb. Sidney.

Icon addenda.

BLANDFORDIA NOBILIS Sm. — Endl. hort. Vindob. tab. IV.

LIX. PHALANGIUM *Juss.*

(Walp. Ann. III. 639. — Knth. IV. 593.)

Icones addendae.

PHALANGIUM TUBEROSUM Kth. — Wight Ic. tab. 2036.
PHALANGIUM ATTENUATUM R. W. — W. Ic. tab. 2037.
PHALANGIUM? OLIGOSPERMUM R. W. — W. Ic. tab. 2038.
PHALANGIUM? PARVIFLORUM R. W. — W. Ic. tab. 2039.

LXVII. THYSANOTUS *R. Br.*

(Walp. Ann. III. 640. — Knth. en. IV. 613.)

1. THYSANOTUS EXASPERATUS F. Müller. — Fragm. phytographiae Australiae 1858. p. 21.

Radice fibrosa ad collum vix incrassata, vaginis exterioribus latis scariosis, foliis angustis subcanaliculatis scabris scapum erectum canalicularem striatum inferne asperum et ebracteatum apice ramosum longitudine subaequantibus, umbellis paniculatis paucifloris, bracteis lanceolatis longe acuminatis, bracteolis cordato-ovatis late membraneo-marginatis acutis articulum inferum pedicelli crassiusculi superantibus, floribus hexandris pedicello subaequilongis, antheris brevibus aequalibus obtusis flavidis.

In apicibus petraeis montium Flinder's Range. — Herba fere pedalis. Folia ½—¾''' lata. Articulus inferior pedicelli superiore pluries brevior. Sepala ½'' longa, interdum duplicia. Antherae lineam paulo excedentes. — T. scabro affinis.

2. THYSANOTUS HUMILIS F. Müller l. c.

Radice fibrosa ad collum haud incrassata, fibris extremitate tumescentibus, vaginis exterioribus latis scariosis, foliis radicalibus angustissimis lineari-canaliculatis parum scabris scapum simplicem brevem laevem compresso-angulatum striatum aequantibus v. superantibus, foliis caulinis 1—2 abbreviatis v. bracteiformibus raro deficientibus, pedicellis lateralibus terminalibusque geminis v. solitariis, v. paucis terminalibus umbellatis, bracteolis ovatis acuminatis membraneo marginatis articulum inferum pedicelli crassiusculi superantibus, floribus hexandris pedicello longioribus, antheris brevibus aequalibus obtusis flavidis.

In pascuis aridis prope fluvium Broughton, oppidulum Clairvillage et montes Barossa Range. — Herba digitalis, raro altior. Radix forsitan bulbos fasciculares producens. Folia vix semilineam lata. Flores saepius racemosi circiter 4''' longi. Articulus inferior pedicelli superiore aliquoties bisve brevior. Antherae 1''' longae. — T. isanthero e brevi diagnosi Browniana propinquus, nec minus T. tenello.

Icones addendae.

THYSANOTUS TENUIS Lindl. — Lem. jard. fl. IV. tab. 402.
THYSANOTUS PROLIFERUS Lindl. — Lem. jard. fl. IV. tab. 406.

LVIII. **SIMETHIS** *Knth.*

(Knth. en. IV. 618.)

1. SIMETHIS PLANIFOLIA Gren. et Godr. — Gren. et Godr. fl. de Fr. III. 222. — *Simethis bicolor* Kunth enum. IV. p. 618. — *Phalangium planifolium* Pers. syn. I. p. 367. — Cfr. l. c. pl. descr. — Hab. per totos Galliae imprimis occidentalis ericetos.

LXXIV. **CUMINGIA** *D. Don.*

(Knth. en. IV. p. 631.)

1. CUMINGIA CAMPANULATA Don. — Gay flora Chilena VI. p. 131.

Fol. lin-lanceolatis, longe attenuatis, canaliculatis; perigonio violaceo-coeruleo, fauce saturatius maculato-punctato; antheris violaceis.

C. campanulata Don in Sweet fl. gard. tab. 197; Hook. exot. fl. III. tab. 214. — Bot. reg. tab. 1192.

Esta bonita planta es algo comun en los cerros de los prov. centr., Santiago, San Fernando, etc.

GENERA ASPHODELEIS AFFINIA.

(Knth. IV. 640.)

LXXXIII. **XANTHORRHOEA** *Smith, Br., Endl.*

(Knth. en. IV. 648.)

1. XANTHORRHOEA DRUMMONDII Harv. — Harvey, new genera of Austral. plants in Kew gard. misc. VII. 57.

Trunco elato simplici, f. rectangule tetragonis, amento cylindrico longissimo (4—8 pedali), bracteis fasciculorum flore subbreviorib. ap. barbatis, perigonii foliolis imberbibus.

Hab. In collis siccis prope Perth et aliubi. — Species maxima et gracillima totius generis, quae resinam pretiosissimam profert. Est facile distinguenda a (X. Preissii?) the common Black-boy foliis suis quadratis nec rhomboideis.

2. XANTHORRHOEA HASTILE R. Br. (Knth. en. IV. 649). — Flore des serres IX. tab. 868. (icon ex Hook. bot. mag. tab. 4722 iterata.)

Ordo XXVI. ASPARAGINEAE *Knth.*

(Knth. en. V. 1.)

I. DRACAENEAE Knth. l. c. p. 2.

I. **DRACAENA** *Vandelli.*

(Knth. en. V. 2. — Walp. Ann. III. 648.)

1. DRACAENA ELLIPTICA Hook. — Hook. bot. mag. 1854. tab. 4787.

Fruticosa, ramis laxis, f. petiolatis elliptico-lanc. subcoriac. nitidis mucronato-acutis nunc abortivis stipulaeformib., petiolis canaliculatis b. dilatato-amplexantib., paniculis terminalib. subsessilib. ramis strictis patentib., bract. minutis, fl. plerumq. ternis pedicellatis, perianthii segmentis linearib. patentib. tubum b. versus inflatum longitud. aequantib., stylo staminib. vix longiore.

Dr. elliptica Thunb. (Kunth enum. pl. V. p. 14.) — *Dr. spicata* Roxb. fl. Ind. II. 157. — *Dr. terniflora* Roxb. l. c. p. 159; Wall. Cat. n. 5147 a. (in herb. Hook.) — *Dr. Wallichii* Knth. (Knth. enum. pl. V. p. 11). — *Dr. Javanica* Knth. en. V. p. 12. — *Sansevieria Javanica* (Blume en. pl. Jav. I. p. 11); Schultes VII. p. 360; Hasskarl, pl. Jav. p. 114. — *Cordyline Sieboldii* Fl. des serres VI. p. 109. t. 569. (fide descr. in Walp. Ann. III. 644). — *Terminalis alba* Rumph. Amb. IV. p. 79. tab. 34. fig. 1.

β. *maculata*: fl. luteo-maculatis (Hook. bot. mag. tab. 4787).

Dr. *maculata* Knth. en. pl. V. p. 13. — *Sansevieria Javanica* β. Hasskarl l. c. p. 114. — *Cordyline Sieboldii* β. *maculata* Planch. et Walp. l. c.

Planta in Archipelago Malayana late vulgata.

2. DRACAENA DRACO L. ex p. — Göppert Beitr. z. Kenntniss der Dracaenen p. 11. t. I.

Arborea; apice ramosa, f. sessilib. semiamplexicaulib. linearib. ap. versus sensim attenuatis ap. ipso canaliculatis spinescentib. planis inferiorib. arcuatim dependentibus, mediis patentib., summis erectis; paniculis terminalib. ramosis foliaceo-bracteatis (ramis ternis patentissimis, florib. quaternis et quinis).

Draco arbor, Clusius pl. rar. l. 1. p. 1 cum ic.; Bauhinus Pinax p. 505, Blackw. herb. tab. 358.

Arbor Draconis, Draco yuccaeformis v. Dracaena, Vandelli dissert. in Roem. script. de pl. Hisp. Lusit. Brasil. p. 37. tab. 2 a et b.

Stoerkia Draco Crantz.

Arbor Draconis latifolia hortulanor.

Yucca Draconis Hoyer Amoenit. acad. Lin.

Asparagus? Draco Lin. sp. pl. ed. 2.

Dracaena Draco Lin. syst. nat. ed. 12.

Dracaena Draco α. strictifolia et β. laxifolia Heyne IX. tab. 2, Kunth enum. V. p. 3. — Hook. bot. mag. tab. 4571.

2. DRACAENA BOERHAVII Ten. — Goeppert Beitr. z. Kenntn. d. Dracaenen (1854) p. 11. tab. II.

Arborea; ap. ramosa, f. sessilib. semiamplexicaulibus linearibus sens. attenuatis ap. canaliculatis spinescentib., juniorib. et adultis laxis flaccidis undulatis dependentib.; paniculis terminalib. erectis (fl. subcampanulatis pedunculis geniculatis longiorib., filamentis medio crassioribus).

Tenore Atti della reale Acad. delle sc. di Napoli t. 3. p. 37 tab. 3.

Cordyline f. inermib. integerrimis flaccidis Royeni Lugd. Bat. p. 22.

Palma f. longissimis pendulis e caudice glabro enatis Boerhave Lugd. Bat. 2. p. 160.

Oedera dragonalis Crantz de 2 Dracon. arbor. p. 30. fig. 3.

Arbor Draconis angustifolia hortulan.

Dracaena Draco pendulifolia Heyne Beitr. l. c.; Kunth enum. V. p. 3.

Dracaena Draco δ. angustifolia Jacq. fragm. 2. p. 4. tab. 2. fig. 4.

Icones addendae.

DRACAENA DRACO Lin. — Tuinbouw Flora III. p. 144. 328. c. tab. — (Specimen insulae Oratavae.)

DRACAENA TERMINALIS Willd. — Wight Ic. tab. 2054.

CALODRACON *Planch.* (Goepp.)

Planchon fl. des serres VI. et VII.

1. CALODRACON JACQUINII Pl. l. c. — Goeppert Beitr. z. Kenntn. d. Dracaenen p. 16. — Cordyline Jacquinii (Knth. en. V. p. 28). — In hortis varietates 2 coluntur.

α. *atrosanguinea* Goepp.: f. aequaliter atro-purpureis. — Drac. ferrea L. syst. n. 275. bot. mag. tab. 2052 et hort.

β. *purpureo-variegata* Goepp.: f. viridibus et purpureis. — Drac. terminalis hortor. nec Reichard.

2. CALODRACON HELICONIAEFOLIUS Pl. l. c. — Goeppert Beitr. p. 17. — Cordyl. heliconiaefolia (Knth. en. V. p. 28.)

3. CALODRACON SIEBOLDII Pl. l. c. — Goeppert l. c. p. 17. — Dracaena nobilis Ht.; Dracaena Sieboldii Ht.; v. Houtt. — In Japonia.

4. CALODRACON NOBILIS Planch. (Calodracon Sieboldii Planch. olim in Fl. des serres VI. p. 137. in annot.). — Planchon in Fl. d. serres VII. tab. 682—683.

II. DRACAENOPSIS *Planch.*

(Walp. Ann. III. 643.)

1. DRACAENOPSIS AUSTRALIS Pl. l. c. — Goepp. Beitr. z. Kenntn. d. Dracaenen p. 16. — Cordyline australis (Knth. en. V. p. 29.)

2. DRACAENOPSIS INDIVISA Pl. l. c. — Goepp. l. c. — Cord. indivisa (Knth. l. c. p. 30.)

III. SANSEVIERA *Thunb. Knth.*

(Knth. en. V. 15.)

1. SANSEVIERA CYLINDRICA Bojer (Hook.) — Hook. bot. mag. tab. 5093.

F. teretibus acuminatis solidis, scapo radicali racemo composito elongato acuminato, sep. linearibus inferne in tubum approximatis demum ap. revolutis, staminib. longe exsertis.

S. cylindrica Bojer, hort. Maurit. p. 349. (nomen solum). — *S. Angolensis* Wellwitsch mss. (Bowstring Hemp.)

Hab. in ora Africano Zanzebar.

2. SANSEVIERA FLEXUOSA Bl. en. I. p. 11; Schult. Syst. VI. (non Hassk. Jav. rar. p. 119). — Hasskarl in Regensb. Fl. (1852) p. 117. — F. sp. longiter acuminata 10—15 poll. longa, 0,6—1,0 poll. l.; racemus terminalis b. foliis nonnullis valde diminutis, bracteolib. involutus, folior. longitudinem ⅓ tantum attingens, 5, 5 poll. longus, firmus sublignosus, (in sicco) subflexuosus: fl. inferiores magis distantes superiores conferti, bract. omnes delapsae una c. pedicellis flor. sterilium, pedicelli fructuum patentes, 0,20—0,25 poll. longi, supra ⅓ articulati; fr. baccati, nunc globosi, 1-loculati, 1-spermi, prout loculi bini aut unus tantum aut nullus sunt aborti; pericarp. carnosum, in siccis tenue rufum, externe irregulariter rugosum; dissepimenta in siccis valde tenuia membranacea, semina ex loculor. ap. pendula subglobosa, in 2—3 spermis ad latus internum ob pressionem collateralium adplanata indeq. subtrigona, latere altero convexo, in trispermis diam. transversali et verticali 0,24—0,25 pollicari, testa tenuissima rubella, nucleo arcte adhaerens; albumen copiosum totum semen implens, cartilagineum solidum, (insiccis) gilvum; embryum ad b. seminis hilo oppositum, tertiam dimetri partem longum, leviter curvatum, ap. versus attenuatum; radicula secus insertionem fructus (nec seminis) aut basin fructus versus spectans.

V. CORDYLINE *Comm.* (*Cordelyne*).

(Knth. en. V. 22. — Walp. Ann. II. 644.)

Planch. fl. d. serr. 1850. 51. p. 136. et 38. — Goeppert Beitr. z. K. d. Drac.

1. CORDYLINE REFLEXA Planch. l. c. — Goepp. Beitr. z. Kenntn. d. Drac. — Dracaena reflexa Lam. (Knth. enum. V.)

2. CORDYLINE SALICIFOLIA Goepp. — Goepp. l. c. p. 18. — Dracaena linifolia hort. — Drac. salicifolia hort. Berol.? — Java?

3. CORDYLINE MADAGASCARIENSIS Goepp. — Goepp. l. c. p. 13. — Drac. Madag. hort. Belg. (Makoy).
4. CORDYLINE CERNUA Planch. l. c. — Goepp. l. c. p. 13. — Drac. cernua Jacq. hort. Schönbr. I. 50 f. 96. — In ins. Mauritii.
5. CORDYLINE RUMPHII Hook. — Goeppert l. c. p. 13. — Drac. angustifolia Roxb. (Kunth en. V. p. 4.) Amboina et Java.
6. CORDYLINE FRUTICOSA Goepp. — Goeppert l. c. p. 13. — Drac. fruticosa hort. Berolin.
7. CORDYLINE FRAGRANS Planch. l. c. — Goeppert l. c. p. 13. — Dracaena fragrans Gawl. in bot. mag. tab. 1081. — Aletris fragrans L. — In Guinea et in Sierra Leone.
8. CORDYLINE SIEBOLDII Pl. l. c. p. 109 et 136. — Goeppert Beitr. z. Kenntn. d. Dracaenen, 1854. — Drac. Javanica (Kunth enum. V. p. 12.)

β. *maculata* Pl. l. c. p. 109. tab. 569. — Java.

9. CORDYLINE FONTANESIANA Pl. l. c. — Goeppert l. c. p. 14. tab. III. fig. 3. — Drac. Fontanesiana Schult. — (Kunth enum. V. p. 10.) In ins. Bourbon.
10. CORDYLINE OVATA Pl. l. c. — Goeppert l. c. — Drac. ovata, Gawl. bot. mag. tab. 1180. (Kunth enum. V. p. 13.) — Sierra Leone.
11. CORDYLINE UMBRACULIFERA Goepp. — Goeppert l. c. p. 15. — Dr. umbraculifera Jacq. (Kunth enum. V. p. 8.) — Culta in Ind. or. et Java.
12. CORDYLINE NUTANS hort. — Goeppert l. c. p. 15. — C. nutans Cunningh.?
13. CORDYLINE COERULEA hort. — Goeppert l. c. p. 15. — In horto pr. Tetschen Joostiano.
14. CORDYLINE HOOIBRENKIANA Goepp. — Goepp. l. c. p. 15. — Drac. Seelandica Hooibrenk.
15. CORDYLINE HUMILIS Goepp. — Goepp. l. c. p. 15. — Drac. humilis Hooibr.
16. CORDYLINE BETSCHLERIANA Goepp. — Goepp. l. c. p. 15. — Drac. arborea vera, Hooibrenk in vico Hitzing prope Viennam.
17. CORDYLINE ARBOREA Goepp. — Goeppert l. c. p. 15. — Drac. arborea Lk. (Knth. en. V. p. 9.)
18. CORDYLINE MARGINATA Goepp. — Goeppert l. c. p. 15. — Drac. marg. Lam. (Knth. l. c. p. 8.)

β. *concinna* Goepp. — Drac. marginata latifolia v. concinna Knth. l. c. — Ins. Madagasc. Bourb.

19. CORDYLINE CANNAEFOLIA Br. pr. — Goeppert l. c. p. 15. — Knth. l. c. p. 35. — Habitat in Nova Holland. trop. — Specimen cultum in Herrenhausen.

Icon addenda.

CORDYLINE STRICTA Endl. — Hook. fl. Nov-Zeland. tab. LVIII.

CHARLWOODIA Sw.

(Knth. en. V. sub Cordyline.)

1. CHARLWOODIA CONGESTA Sweet. — Goeppert Beitr. z. Kenntn. d. Dracaenen p. 17. — Cordyline congesta (Knth. en. V. 32.)
2. CHARLWOODIA STRICTA Sw. — Goeppert l. c. p. 17. — Cordyline stricta (Knth. l. c. p. 33.)
3. CHARLWOODIA SPECTABILIS Pl. l. c. — Cord. spectabilis (Knth. l. c. p. 30.) — Augustinia (ubi?)
4. CHARLWOODIA ANGUSTIFOLIA Goepp. — Goeppert l. c. p. 17. — Cord. angustif. (Knth. l. c. p. 32.)
5. CHARLWOODIA RUBRA Pl. l. c. — Goeppert l. c. p. 17. — Cord. rubra (Knth. l. c. p. 35.)
6. CHARLWOODIA FRAGRANTISSIMA Lemaire le Floriste IV. pl. 309. Oct. et Novbr. 1853. — Goepp. l. c. p. 18. — Hab. in St. Paul in Brasilia.

7. CHARLWOODIA ENSATA Goepp. — Goepp. l. c. p. 18. — Dracaena ensata Hooibrenk, vix Drac. ensata Thunb. (Knth. l. c. p. 15.)

8. CHARLWOODIA LONGIFOLIA Goepp. — Goeppert Beitr. z. Kenntn. d. Dracaenen p. 18. — (Hort. Belgic. Makoy.)

9. CHARLWOODIA AUSTRALIS Goepp. — Goeppert Beitr. z. Kenntn. d. Drac. p. 18. — Species nova ex Nova Zeelandia in horto cl. Hooibrenk.

10. CHARLWOODIA FRAGRANTISSIMA Lem. — Lem. jard. fl. IV. t. 369. (misc. IV. p. 57.) — Stipite arborescente subramoso (?); fol. b. dilatata subamplexante mox coarctatis grosse extus carinatis dein late lineari-lanceolatis tenuib. recurvis undique concoloribus marg. cartilaginaceo obsoletissime serrulato ap. longe involuto-acuminatis tripedalibus; panicula amplissima terminali tota glaucescenti-violacea, spicis cylindrico elongatis; floribus (fragrantissimis) alternis confertissimis, pedicellis tribracteolis brevissimis, tubo infundibuliformi brevi subhexagono verruculoso, limbi vix ⅓ part. tubi aequantis lobis biseriatis crassis brevib. vix patulis binerviis triangulari-obtusis internis ad os auriculatis; filamentis brevissimis, antheris os vix superantibus; ovulis in loculo unoquoque pluribus pluriseriatis; stigmate capitatim trilobo papilloso.

Ch. fragrantissima Lem. l. c. misc. IV. p. 57. — *Dracaena elegans* et Dr. sp. hort.

11. CHARLWOODIA RIGIDIFOLIA C. Koch et Bouché ind. sem. h. Berol. 1855.

Dracaena yuccifolia Hort.

Caulis mediocris; folia rigida, stricta, serrulata; panicula racemosa, lateralis; flores solitarii aut inferiores gemini; bractearum infera longior, floris basin ambiens; sepala exteriora semper erecta.

Species jam diu in hortis Berolinensibus nomine Dracaenae yuccifoliae et D. congestae var. culta haud aegre distinguenda est foliis rigidis et iis Ch. congestae Sweet substantia durioribus, etiam magis serrulatis et intensius viridibus. Bractea infera basin floris non attingente, sepalis exterioribus sub anthesi revolutis et staminibus styloque lilacinis Ch. congesta Sweet a planta nostra praeterea discrepat. — Caulis mediocris, debilis, 6—7 lin. crassus, dense cicatrisatus, simplex; folia patentissima, rigida, 1½ poll. longa, supra medium 6 lin. lata, deinde ad apicem lanceolata, ad basin contra paullo angustiora, lineata, multinervia; panicula prope apicem caulis lateralis pedunculo communi brunneo-viridi, angulari; rami simplices, patentissimi, floribus breviter pedicellatis dense obsiti; bracteae inaequales, parvae, ovato-lanceolatae, laterales infera duplo breviores; perianthii dilute violacei sepala ovato-lanceolata, exteriora semper erecta, interioribus sub anthesi et serius revolutis duplo breviora. Antherae erectae, flavae, filamentis albis aequilongis, a stylo albido indiviso vix superatae; germen globosum, 3 loculare, loculis pluriovulatis; ovula uniseriata, anatropa. — *Patria* ignota, sine dubio Nova Hollandia.

VII. DASYLYRION *Zucc.*

(Knth. en. V. 38. — Walp. Ann. III. 644.)

1. DASYLYRION LINDHEIMERIANUM Scheele. — Ad. Scheele in Linn. XXV. p. 262.

Caulis erectus 3—5 pedalis striatus glaber foliosus ap. paniculatus inferne teretiusculus superne angulatus. F. radicalia 2—3 pedalia caule breviora anguste lanceolata, striata glabra canaliculata ap. versus longe attenuato-subulata ap. ipsa truncata b. marg. scarioso instructa vix dilatata, marg. spinuloso-scabra spinis validis inter spinulas (serraturas) destituta, spinulae horizontaliter patentes e b. latiore acuminatae incurvae. — Panicula terminalis simplex oblonga 1—2 pedalis, ramis acutanguli glabri decrescentes; inferiores erecti superiores patentes. Flores dioici.

Masc. F. caulina inferiora b. dilatata vaginantia lin-lanceolata ap. truncata. F. floralia i. e. paniculae ramos inferiores stipantia decrescentia, e b. latiori semiamplexicauli

subulato-acuminata marg. laevia, inferiora herbacea marg. scariosa 2—4 uncialia, superiora breviora membranacea, infima ramos superantia reliqua ramis breviora. — Flores pedicellati secus ramos per 3—5 fasciculato-congesti, in ramis racemoso-spicati magnitudine Sambuci nigrae; pedicelli patentes perigonium aequantes v. superantes medio reticulati b. bracteolati. Bracteolae hyalinae latae acuminatae laceratae pedicellis plerumque breviores. — Perigonium corollaceum profunde 6 partitum albidum glabrum, laciniae ellipticae 1-nerviae acutiusculae naviculares patentes ima b. connatae, staminibus longiores longitudine subaequales. Stamina 6 foliolorum b. inserta. Filam. filiformia. Anth. ellipticae biloculares dorso medio affixae introrsae flavae.

Femina: F. caulina inferiora e b. dilatata vaginante longe subulato-acuminata, floralia membranacea ramis breviora. Pedicelli subgemini perigonio longiores infra medium articulati. Perig. persistens. Stam. 6 laciniarum b. inserta, antheris effetis. Ovar. liberum sessile ovale triquetrum glabrum ap. depressum. Columna stylina terminalis brevissima in stigma trilobum dilatata, stigmatis lobi breves obtusissimi. Fructus (samara) ovato-oblongus trigonus triloc. abortu sub 2-spermus, angulis in membranam latam expansis, membrana fructum latitudine aequans. Pedicelli fructu subbreviores. Semen obovatum trigonum badium. — In rupestribus pr. Neubraunfels.

2. DASYLYRION TEXANUM Scheele (Walp. Ann. III. 644. 1.) — Scheele in Linn. XXV. p. 265. — Descriptio l. c. hisce emendanda: F. marg. spinosa inter spinas serratulo-scabra, spinae validae flavae cartilagineae conico-subulatae incurvae 2—6 lineas a se invicem remotae 1—1½ lin. longae, serraturae minimae densissimae spinulosae horizontaliter patentes. — A D. Lindheimeriano toto coelo abhorrens.

3. DASYLYRION HARTWEGIANUM Zucc. (Knth. en. p. 41). — Hook. bot. mag. t. 5099.

VIII. DIANELLA *Lam.*

(Knth. en. V. 43. — Walp. Ann. I. 871.)

1. DIANELLA ENSIFOLIA Ait. — Wight Ic. tab. 2056.

II. ASPARAGEAE Knth.

VIII. ASPARAGUS *Linn.* ex p. *Knth.*

(Knth. en. V. 57.)

1. ASPARAGUS SQUARROSUS Schmidt. — Schmidt Flora d. Capverd. Inseln 1852. — Ramis confertis squarrosis rigidis f. ternatis aciformib. nitidis pubescentibus, stipulis membranac. mucronatis, fl. subsolitariis flavicantibus, perigonii phyllis erectis oblongo ovatis, bacca pruinosa monosperma. — Fruticulus ramosissimus squarrosus, ramis confertis, dependentibus rigidis, cortice chartaceo plumbeo, juniorib. subtilissime striatis. F. ternata aciformia subteretia canaliculata acuta nitida pubescentia viridia. Stip. (Fol. Auct.) sessiles membranaceae, squamaeformes triangulares, mucrone subtus deorsum spectante rigido. Flores plerumq. solitarii rarissime 2—3 terminales, brevit. pedicellati, suaveolentes. Pedunc. glabri, in medio nodosi. Perig. campanulatum flavescens, phyllis erectis oblongo-ovatis, obtusis, externe glabris, interne subpruinosis. Fil. 6 subulata. Styl. brevis stigm. 3-fido. Bacca globosa 1-loc. viridis, opaca pruinosa, magnitud. baccarum Vaccinii Myrtilli. Semen unicum globosum nigrum. — Hab. in rupestribus ins. S. Antonii pr. Ribeiram grandem Mart. 1851. Spec. flor. et fruct.!

2. ASPARAGUS ALTISSIMUS Munby. — Munby Bullet. de l. soc. bot. de Fr. II. 287. — Caule fruticoso, 6—18-ped., inermi, glaberr. scandente; ramis deflexis, prehensibilib.; f. acicularib., fasciculatis inaequalib.; fl. pedunculatis, fasciculatis; baccis

nigris. — Species intermedia inter A. acutifolium et album. Fl. fragrantes. — In rupium fissuris montis Djebel-Santo prov. Algeriae.

3. ASPARAGUS ASIATICUS Lin. — Wight Ic. tab. 2055.

4. ASPARAGUS RACEMOSUS Willd. — Wight Ic. tab. 2056.

XII. GEITONOPLESIUM *Cunningh.*

(Knth. en. V. 112.)

1. GEITONOPLESIUM ANGUSTIFOLIUM C. Koch in ind. sem. h. Berol.
Eustrephus angustifolius hort. Berol. 1827; Lk. enum. pl. hort. Berol. I. 340. — *Medeola angustifolia* Vent. jard. d. Malm. 1825. Red. Liliac. tab. 393.

Rami et ramuli elevato-striati; folia alterna, elongata, lanceolato-linearia, 11—15 nervia; umbella subtriflora, breviter pedunculata, folio brevior; perigonium ab initio campanulatum, denique expansum, sepalis oblongis, exterioribus juventute extus viridibus; antherae obtusiusculae.

Suffrutex scandens et passim volubilis, ramosus; rami tenues, pallide-virides, flexibiles, elevato- vel subalato-striati; ramuli solitarii, basi squamis pellucido-aridis oblongo-lanceolatis nervosis fulcrati; folia elongata, 1½—2 pollicaria, 3 lin. lata, apiculata, petiolo basi articulato brevissimo insidentia, alterna; stamina basi sepalorum inserta, his vix breviora, antheris erectis; germen trigono-subrotundum, apice paululum depressum; stylus filiformis stamina vix superans; bacca coeruleo-nigra, monosperma. — Species hucusque cum G. cymoso Cunningh. commutata, etiam habitu, praesertim vero ramis et ramulis elevato- vel subalato-striatis, foliis multo angustioribus et antheris muticis, nec apiculatis distinguenda. Patria sine dubio insula Norfolk et Nova-Hollandia.

Ordo XXVII. SMILACINEAE *Lindl.*

(Knth. en. V. 114. — Walp. Ann. III. 645.)

III. TRILLIUM *Mill.*

(Knth. en. V. 121.)

Icones addendae.

TRILLIUM ERECTUM Lin. (Knth. en. V. p. 126.) — Flore des serres X. tab. 990.
TRILLIUM GRANDIFLORUM Salisb. (Knth. en. V. 125.) — Fl. d. serres X. tab. 991.

IV. CONVALLARIA *Neck.*

(Knth. en. V. 130.)

Griffith notulae posth. (1851) tab. 274. Itin not. p. 175. Boot. n. 896.

V. POLYGONATUM *Tournef.*

(Knth. en. V. 131. — Walp. Ann. III. 645. I. 878.)

1. POLYGONATUM GRAMINIFOLIUM Hook. — Hooker Ic. pl. ser. nov. V. tab. 833. (Bunroonae).

Humilis, caule b. vaginato ap. folioso, f. arcte approximatis linearib. obtusiusc. glabris strictis erecto-patentib. inferiorib. alternis reliquis oppositis, pedunc. axillarib. bifid. bifloris subnutantib. folio duplo triplove brevioribus, perianthio (fusco-purpureo) infundibuliformi, limbi lob. ovatis obtusis, anth. subsessilib., ovario elliptico longitud. styli, stigmate trifido.

Hab. Barung, in Himalaya occid. in alt.: 11000'. Juni 1844. Capt. Munro.

2. POLYGONATUM ORIENTALE Desf. (Knth. en. V. 140.) — Jaub. et Spach ill. pl. or. V. tab. 441 c. descr.

VII. SMILACINA Desf.

(Knth. en. V. 148. — Walp. Ann. III. 645.)

Icon addenda.

SMILACINA BOOTANENSIS Griff. — Griffith notulae posth. (1851) tab. 279. — It. notes p. 178. Boot. n. 920.

XII. SMILAX Tournef.

(Knth. en. V. 160. — Walp. Ann. I. 878.)

1. SMILAX MAURITANICA Poir. (Webb) — Fl. d. serres tab. 1049. p. 197.

Caulibus alte scandentib. sparsim aculeatis v. inermib., f. late ovatis b. subcordatis v. truncatis 5—10 nerviis marg. inermibus v. brevit. aculeatis concoloribus, ovario saepe subquadriloculari loculo quarto vacuo, stylis subnullis, stigmatib. elongatis ap. vix latioribus, baccis magnis rubris (globosis) 1—3 spermis, seminibus ovato-orbicularibus latere compressis luteo-badiis, tenuissime rugosis, hilo magno. — Webb.

Sm. Mauritanica Poir. voy. vol. II. p. 263. — Desf. Fl. Atl. II. p. 367. — Boiss. voy. bot. d'Esp. II. p. 609. — Webb Phytogr. Canar. III. p. 322. — *Sm. pendulina* Lowe (Knth. en. V. 215) monente Webb. — *Sm. rubra?* Willd. enum. 1014. (Knth. l. c. 218.) — *Sm. nigra?* Willd. spec. IX. pag. 774.

Habitat in Algeria caet., una c. Sm. aspera.

2. SMILAX OFFICINALIS H. B. K. — Seemann bot. of the Herald p. 217—220.

Smilax papyracea Duham. Arb. ed. Mich. I. p. 242. — *Smilax medica* Schlechtd. et Cham. in Linn. VI. p. 47.

Nomen vernaculum „Sarzaparilla" volcano of Chiriqui, Veraguas (Warszewicz).

3. SMILAX LANCAEFOLIA Roxb. — Seemann bot. of the Herald p. 420 tab. 99.

Glabra inermis v. sparse aculeata, ramis teretib. f. oblongis acuminatis, acumine complicato-recurvatis, in petiolum dorso carinatum decurrentib. 3—5-nerviis, umbellis axillarib. simplicibus longe pedunculatis, pedunculis supra b. bibracteolatis, lobis perigonii exteriorib. oblongis acutiusculis, interiorib. paulo minorib., staminib. liberis, antheris apertis subovato-oblongis obtusis filamento triplo breviorib., baccis globosis.

S. *lancaefolia* Roxb. fl. Ind. III. 792. — *S. oxyphylla* Wall. Cat. n. 5128. — Knth. enum. V. 238. excl. syn.

Hab. Hongkong scandens supra frutices. — Khassiya Hills.

4. SMILAX GLABRA Roxb. (Knth. enum. V. p. 162. 3). — Seemann bot. of the Herald p. 420. tab. 100.

5. SMILAX HONGKONGENSIS Seem. — Seemann bot. l. c.

Inermis glabra, ramis striatis ramulis subangulatis, f. cordatis v. ovatis acuminatis mucronatis, umbellis axillarib. solitariis v. geminis,

perigonii foliolis erectis connatis, staminib. 8, monadelphis, antheris cordatis acuminatis, baccis subtrilobis 3-spermis.

Hongkong, scandens supra frutices, Hance, Seem.! — Flores femin. huj. speciei adhuc desiderantur, quae species perigonii sui foliolis connatis staminibusq. monadelphis distinctissima est.

4. SMILAX FEROX Wall. (Knth. en. V. p. 251). — Seemann bot. of the Herald p. 420. n. 600. — Scandens supra frutices, Hongkong. — In China Fortune eam collegit (n. 71), in montib. Khassiya Griffith.

Icones addendae.

SMILAX ZEYLANICA Linn. — Wight Ic. tab. 2057 ♀. 2058 ♂.
SMILAX MACULATA Royle. — Wight Ic. tab. 2059.

XV. RIPOGONUM *Forst.*

(Knth. en. V. 270.)

1. RIPOGONUM ALBUM R. Br. Prodr. I. p. 293. — Ferd. Müll. Fragm. phyt. 1866. p. 43.

Glabrum, foliis oppositis v. ternatis v. floralibus alternis ovatis v. lanceolato-ovatis in basin paulo angustatis apice breviter acuminatis, nervis foliorum lateralibus prope basin folii ortis, racemis simplicibus, floribus parvis brevissime pedicellatis, sepalis ovatis obtusis antheras fere uncinato-acuminatas vix superantibus, stylo brevissimo germineque glabris, stigmate obtuso.

In Nova Austro-Vallia usque ad sinum Moreton Bay. — Folia pleraque inter. 1½ et 3 pollices longa. Petioli torti. Racemi sesqui- v. bi-pollicares. Sepala circiter 2 lin. longa ovata. Antherae lineam longae. Flores penitus evolutos et fructus nondum vidi.

2. RIPOGONUM MOORIANUM F. Müll. l. c.

Glabrum, foliis alternis lanceolato-ovatis in petiolum sensim angustatis apice in acumen elongatum angustum productis, nervis foliorum lateralibus prope basin folii ortis, racemis simplicibus, pedicellis flore duplo triplove brevioribus, sepalis magnis antheras breviter superantibus, stylo germini aequilongo quocum glabro.

In Australia orientali subtropica detexit amic. Carolus Moore, horti bot. Sydney. Director. — Folia in unico specimine mecum communicato 2½—3 poll. longa. Petioli torti. Racemi bi- tripollicares. Sepala circiter 3 lin. longa oblongo-ovata. Stylus sicut filamenta demum lineam longa. Antherae sesquilineam longae.

3. RIPOGONUM ELSEYANUM F. Müll. l. c.

Petiolis brevibus pedunculisque ferrugineo-tomentosis, foliis magnis oppositis ovatis antice sensim acutatis basi cordatis, nervis foliorum lateralibus alte supra basin folii ortis, spicis elongatis simplicibus, sepalis magnis antheras demum conspicue superantibus, stylo brevissimo, germine tomentoso, stigmate incrassato trilobulo-capitato.

In Australia orientali calidiore. C. Moore. — Folia in unico specimine viso fere semipedalia. Petioli crassi semuncia breviores. Spicae sex-ad octo-pollicares. Sepala 3—4 lin. longa oblongo-ovata glabra. Stylus tomento albido occultus germine multo tenuior. Antherae 2 lin. longae. — Speciem generis nobilissimam tribui memoriae Josephi Elsey, in itinere Gregoriano per plagas Australiae intratropicas socii nostri amabilis, qui faunam hujus tractus gnaviter perscrutatus est, tunc investigatione florae Antillanae occupatus praemature obiit.

Ordo XXVIII. LAPAGERIEAE *Knth.*

(Knth. en. V. 283. — Walp. Ann. III. 646.)

Philesiaceae Lindl. — Familia distincta et merito quidem Philesiam typum una cum Lapageria huc usque complectens. — Lapagerieae Knth.! — Quam ob causam ista nominis mutatio? — Lem. in ill. hort. 1854 sub Philesia buxifolia.

I. LAPAGERIA *Rz. et Pav.*

(Knth. en. V. 283. — Walp. Ann. III. 646.)

1. LAPAGERIA ALBA. — Gay Fl. Chilena VI. p. 47.

Caule flexuoso, f. subacuminatis, b. cordatis, fl. subsessilib., candidis aut tantummodo b. pallide roseis.

L. alba Decaisne, Rev. hortic. 1. dec. 1852. fig. 23.

II. PHILESIA *Commers.*

(Knth. en. V. 284.)

Hook. char. emendat. (Knth. enum. V. p. 285). — Hook. bot. mag. 1853. tab. 4738.

Fl. hermaphrod. Cal. 3-phyll., b. bracteatus, foliol. oblongis membranac-scariosis erectis. Pet. 3, calyce 4-plo longiora majoraq., obovato-oblonga, mucronulata, campanulato-conniventia, ima b. in tubum connata, int. glandula seu tubercula nectarifera, cereacea, siccitate venosa, subt. glauca. Stam. 6, longit. fere petalorum. Fil. inferne monadelpha et ima b. petalor. conjuncta. Anth. erectae, oblongae, subsagittatae basifixae. Ovar. ovale, trigonum, liberum, 1-loculare, placentis 3 parietalib. Ovula plurima. Styl. stamina paulo superans. Stigma dilatatum, marg. reflexo subtrilobo. Bacca ovali-glob., (ut videtur) pulposa polysperma, mucronata

Suffrutex Magellanicus, erectus, ramosus, ramis alternis squamoso-bracteatis ap. praecipue foliosis. F. alterna, lin-elliptica, coriac., mucronata, pennivenia, subt. glauca, marg. reflexa; petiolis brevib. articulatis. Fl. speciosi, nutantes, in ramos terminales solitarii, brevissime pedunculati, pedunc. bracteatis.

1. PHILESIA BUXIFOLIA Lam. Knth. l. c. — Lindl. veg. Kingd. ed. II. p. 217 c. ic. floris. Hook. fil. fl. Antarct. II. p. 355. — Fl. des serres IX. tab. 878. (Icon ex Hook. iterata). — Decaisne in Dum. d'Urv. voy. 1853 p. 17. tab. V. fig. A. — Philesia Magellanica Raeusch nomencl.

Ordo XXIX. ROXBURGHIACEAE *Wall.*

(Knth. en. V. 286.)

I. ROXBURGHIA *Jones.*

(Knth. en. V. 286.)

1. ROXBURGHIA GLORIOSOIDES Drland. — Wight Ic. tab. 2061.

Ordo XXX. OPHIOPOGONEAE *Knth.*

(Knth. en. V. 297.)

I. OPHIOPOGON *Gawl. et Endl.*

(Knth. en. V. 297.)

1. OPHIOPOGON INDICUS R. W.; Rottler? — Wight Ic. tab. 2050.

III. PELIOSANTHES *Andr.*

(Knth. en. V. p. 306)

Icones addendae.

PELIOSANTHES COURTALLENSIS R. W. — Wight Ic. tab. 2051.
PELIOSANTHES NEILGHERRENSIS R. W. — Wight Ic. tab. 2052.

Ordo XXXI. ASPIDISTREAE *Endl.*

(Knth. en. V. 310.)

IV. MACROSTIGMA *Knth.*

(Knth. en. V. 319.)

1. MACROSTIGMA TUPISTROIDES (Knth. en. V. p. 319.) — Regel Gartenfl. VI. t. 192.

Ordo XXXII. DIOSCOREAE *R. Br.*

(Dioscorineae Knth. en. V. 323. — Walp. Ann. III. 647.)

I. DIOSCOREA *Linn.*

(Knth. en. V. 325. — Walp. Ann. l. c. 647.)

1. DIOSCOREA RETICULATA Gay. — Gay Flora Chilena VI. p. 61.

Volubilis, glabra; caule subcompresso, f. sparsis, tenuiter membranac., punctulis lineolisq. pellucidis destitutis, 7-nerviis, nervo utroque extimo bifido, reticulatis, inferiorib. b. cordatis, superiorib. truncatis, subt. pallidiorib., 7-lobis, lob. lateralib. acutis aut subobtusis, interm. majusculo, acuminato-subulato, trinervio; spicis masc. axillarib., solitariis,

simplicib., elongatiss., longe pedunculatis; fl. brevit. pedicellatis, remotis, rare per 2—3 congestis; perigonii urceolato-rotati laciniis oblongo-lanc. subacutis, aequalib.; staminib. 6, b. laciniar. insertis; capsul. ap. truncatis, triquetro-trialatis, membranaceis, in axillis folior. solitariis.

Species valde distincta en los bosques de Talcaregue in provinc. de Conchagua.

2. DIOSCOREA FASTIGIATA Gay. — Gay Flora Chilena VI. p. 54.

Humilis, glabra; caule subnullo, compresso; f. crassiusculis, prof. cordatis, integris aut tenuiter erosis, obtusis, apiculatis, 7-nerviis, nervo utroque extimo bi-fido, inferiorib. longe petiolatis, racemis masculis numerosissimis, ramosis, paniculato-subfastigiatis; terminalib., fl. longe pedicellatis, quandoq. sterilib., perigonii rotati laciniis oblong., obtus., 1-nerviis, subaequalib.; pedunc. femineis paucifloris, axillarib. aut terminalib.; capsulis orbiculato aut obovato-truncatis, membranaceis, tripteris.

Species valde distincta, in arenosis littoris maris inter Coquimbo et Huasco.

Icones addendae.

DIOSCOREA ACULEATA Linn. — Wight Ic. tab. 2060.
DIOSCOREA JAPONICA Thunb. — Tuinbow Flora I. tab. 13.
DIOSCOREA BATATAS Decaisne. — Flore des serres X. tab. 971. (2. tab.)
BOTHRYOSYCIOS Hochst. (Walp. Rep. V. p. 774.) — Planchon Ann. sc. nat. IV. tom. 3. p. 296. = *Dioscorearum* spec., foliis digitatis.

HELMIA *Knth.*

(Knth. en. pl. V. 414.)

1. HELMIA RACEMOSA Klotzsch. — Paxton fl. gard. III. 57. n. 526.

Suffrutex volubilis, glaber, rhizomate tuberoso, carnoso; ramis teretib; f. sparsis, cordato-ovatis, acuminatissimis 9-nerviis, supra laete viridib., subt. pallidis nitidis, versus bas. glandulis scrobiculatis sparsis obsitis, petiolis basi apiceq incrassatis; racemis masculis axillarib. solitariis, racemosis, folio subtriplo breviorib.; rhachib. angulato-alatis, alis brevissimis, minutissime puberulis; fl. solitariis bracteisq. duabus ad b. pedicelli purpureis; perigonii turbinato-rotati laciniis ovato-oblongis, subobtusis, patentissimis; staminib. 3 brevissimis, arcte approximatis, centro disci atro-purpurei hexagoni insertis; antheris introrsis bilocularib. post dehiscentiam saturate aureis; rudimento stylino nullo.

Detecta a Warszewicz in Am. centr. — Klotzsch in Allg. Gart. Ztg. Dcbr. 13. 1851.

Ordo XXXIII. TACCACEAE *Lindl.*

(Knth. en. V. 457.)

I. TACCA *Forst.*

(Knth. l. c. 458.)

1. TACCA PINNATIFIDA. Griffith notulae (1851) p. 238—240. tab. 272. A. fig. 1 et 2.

II. ATACCIA *Presl.*
(Knth. en. V. 464.)

1. ATACCIA CRISTATA. — Hook in bot. mag. tab. 4589.

Involucri foliolis tetraphyllis duab. serieb. insertis quorum 2 interiorib. superiorib. unilateralibus erectis maximis ovato-rotundatis inferne longe attenuatis 2 exteriorib. oppositis ovato-acuminatis patentib., peduncalis sterilib. copiosis semipedalibus, f. oblongis, scapis petiolisq. erectis elongatis laevibus.

A. cristata (Knth. en. pl. V. 466. n. 4.) — Fl. d. serres IX. tab. 880—881. Singapore et Polo - Penang.

Ordo XXXIV. MELANTHACEAE *A. Gray.*
(Knth. en. IV. 132. — Walp. Ann. III. 648.)

Griffith notulae (1851) Ic. pl. Asiat. tab. 278. fig. 2.

HEWARDIA *Hook.*
Hook. Ic. pl. ser. nov. V. tab. 808. (Gansianae).

Perianth. 6-phyll., corollatum, stellato-patens, sepal. magnis acuminatis. Stamina 3, libera, b. sepalor. exter. inserta; filam. lato-subulata, brevia; anth. filamentis longiores, oblongae, b. bifidae, affixae posticae. Ovar. pyramidatum, obt. triquetrum, 3-loculare, loculis duplici serie polyspermis. Stylus ovario brevior. Stigmata 3 crassa, recurvata, stylo paulo breviora. Fructus...

Herba Tasmanica acaulis. F. numerosa, ensiformi-graminea, arida rigida, disticha, longe, aequitantia, vaginis elongatis nitidiss. Scapus foliis longior, erect. flexuosus, bracteatus; bracteis inferne longe vaginantib., suprema spathacea florifera. Spatha 1—2 flora. Fl. speciosi siccitate atro-purpurei, triandri. Habitu Iridis v. Sisyrinchii.

1. HEWARDIA TASMANICA Hook. — Hab. In ericetis, Macquarrie Harbour, Van Diemens Land. — Genus Pleeae generi affine, quamquam multis characterib. ab eo distinctissima.

Tribus I. *COLCHICEAE* Nees.
(Knth. en. IV. 137.)

I. COLCHICUM *Linn.*
(Knth. IV. 138. — Walp. Ann. I. 874.)

1. COLCHICUM KOTSCHYI Boiss. in Kotschy pl. Pers. bor. 1847. — Boissier l. c. p. 88.

C. bulbo oblongo tunicis tenuibus membranaceis fuscis in vaginam elongatam productis vestito plurifloro, vagina tubulosa obtusa apice fissa

tubum florum amplectenti, foliis hysteranthiis..., perigonii tubo e vagina longe exserto limbo 5—6 plo longiori, laciniis pallide roseis concoloribus anguste elliptico-linearibus obtusis obsolete 16—18 nerviis, nervis rectis distinctis venis paucissimis transversis, antheris flavis linearibus rectis filamento paulo supra suam basin insertis eoque subaequilongis, stylis in stigmata apice subincurva subincrassatis stamina superantibus.

Hab. in solo schistoso ad radices montis Bibrus prope Passgala Fl. Aug. Kotschy pl Pers. bor. exs. Nr. 655. — Bulbus in meo specimine magnit. nucis sed longior. Perigonii tubus semipedalis et ultra. Limbi laciniae sesquipollicem circiter longae, parte latiori 2½—3 lineas latae. Antherae 4 lineas longae. Species foliis deficientibus imperfecte nota C. autumnali ut videtur affinis distincta tubo perigonii longiori, laciniis angustioribus nervis paucioribus percursis, antheris longioribus filamento aequilongis, nec eo 2—3 plo brevioribus prope basin nec medium versus affixis. C. umbrosum Stev. habet flores dimidio minores laciniis perigonii oblongis et longius distat.

2. COLCHICUM PANNONICUM Griseb. et Schenk. — Wiegmanns Arch. 1852. I. p. 359. (*C. multiflorum* Schur nec Bert.)

Autumnale, foliis hysteranthiis oblongis, perig. roseo, limbo (1½" longo) tubo 4—6 plo superato, segmentis oblongis v. spathulato-oblongis obtusis 13—17 nerviis, alternis paulo brevioribus, nervis superne rectis (rarius flexuosis) venis remotis, stylis ap. uncinatis limbum dimidium et stamina superantibus.

Colch. multiflorum Schur ined. nec Bertero; *Colch.* sp. Heuf. pl. Ban. Proximum C. autumnali L., distinctum perigonii limbi segmentis alternis brevioribus, stigmate magis uncinato, foliis latioribus 1½" latis, habitu perigonii latitudine et proportione segmentorum etiam eximie accedit ad C. Byzantinum Ker, differt vero stylo limbi ⅔ aequante, stamina excedente (nec limbum ⅓ et stamina aequante) foliisque oblongis. — Hab. in Banatu in monte Serbanå ad balneis Herculeanis; in Transsilv. pr. Hermannstadt.

Sectio *HERMODACTYLUS* R. Br.

Schott in Oestr. bot. W. Bl. 1854. p. 98. (char. ampl.)

Sepala interiora fauce bicalloso-pulvinulata. Filamenta ad insert. bulboso-incrassata. Anth. erectae, subbasifixae. Stigmata punctiformia in vertice styli. Ovar. triloculare. Ovula biseriata. Folia synanthia.

Huc C. Bertholonii Stev. (ex autopsia), C. bulbocodiodes Bieberst. (ob stigmata „simplicia, rotunda") C. Szovitsii C. A. Mey. (ob filamenta b. incrassata).

3. COLCHICUM (*Hermodactylus*) CROCIFLORUM Schtt. et Kotschy. — Schott, Oestr. bot. W. Bl. 1854. p. 97.

C. (H.) .Fol. linearib. erectis, glabris, ap. versus sens. angustatis, subcarinatis; sep. exteriorib. lanc-ellipticis, 7-nerviis, interiorib. breviorib. 5-nerviis; filamentis b. aurantiacis, interiorib. ibi utrinq. pulvinula (longitudinali) comitatis; antheris griseo-coerulescentibus.

Hab. in Tauro Ciliciae (Kotschy). — Tuber cylindraceum, tenue, infima b. in canaliculi latere radices 4—5 tuberosas, elongato-conicas, subverticaliter descendentes, pollicem v. 1½ poll. longas, 2—2½ lin. crassas, fibris longiss. tenuib. copiosis suffultas exserens. Vagina simplex, nervoso- ap. subplicato-striata, dorso canaliculo tuberis incumbens, summo ap. gibboso-apiculata. F. laete viridia (florendi tempore) erecta, anguste linearia, subcarinata, marg. laevia, 13—29 striata, apicem vers. sens. angustata, ibique incrassato-complicata, obtusata apiculo rubro-violaceo. Perigonium pallide roseum, foliis paulo altius, tubo gracili limbo triplo et ultra longiore. Sepala erecto-

patula v. patentia, exteriora lanc-elliptica, obtusula v. et emarginata, 7-nervia, nervis ap. ramulo uno alterove auctis, excepto medio in apicem excurrente, deliquescentib.; interiora 5ta parte breviora, ap. complicato implicato obtuso, 5-nervia, nervis quoque ramulo interd. auctis, medio excurrente. Stam. antheris media sepala attingentia Filam. subulata, crassiuscula ad insertion. bulboso-incrassata, ibique colore aurantiaco notata, caeterum pallide flaventia; interiora utrinq. plico calloso-pulvinari sepali ad b. comitata. Anth. (semper erectae) sagittato-oblongo-ovatae s. sagittato-oblongo-obovatae ap. emarginatae, griseo-coerulescentes, introrsae, rimis aperientes, valvis tand. extrorsum flexis, subbasifixae, connexivo lanceolato, pallidiore. Styli 3 subulati, sep. interiorib. paulo breviorib., summo ap. stigmatiferi. Stigma punctiforme, minutissime papillosum. Ovar. 3-loculare, ovul. biserialibus.

4. COLCHICUM AUTUMNALE L. — Irmisch Abhdlg. d. Naturf. V. I. p. 129. t. I. f. 1—30.

III. MERENDERA *Ramon.*

(Kuth. en. IV. 148. — Walp. Ann. III. 648.)

1. MERENDERA BULBOCODIUM Ramon. Bull. Philom. n. 47. tab. 12. fig. 2.
(*Colchicum bulbocodioides* Brot.)

Regel Ind. sem. h. bot. Petrop. 1857. — Figura et descriptio Broteroi Phyt. Lus. sel. p. 119. tab. 50. optime congruunt cum planta nostra (albiflora), quae a speciminibus quoque numerosis M. Bulbocodii genuinae in herb. Fischeriano asservatus non differt. M. Bulbocodium Redouté Lil. tab. 25 recedit staminibus acutissimis. Cl. Boiss. (Voy. bot. dans le midi de l'Esp. 2. p. 622). Broteroi plantam cum signo ? ad Merenderam filifoliam Camb. ducit, quae nobis tamen e descriptione toto coelo diversa videtur (Reichenb.)

2. MERENDERA ROBUSTA Bge. — Bunge Al. Lehm. reliq. bot. p. 339.

Bulbo ovato-oblongo crasse tunicato, caule 5—7 phyllo 2—4 flore, f. synanthiis lanceolatis marg. serrulato-scabris planis, perigonii unguibus longe exsertis laminas oblongas obtusas b. attenuatas duplo superantibus, antheris filamenti parte libera longioribus linearibus erectis, capsu'ae folliculis ap. divergentibus.

Hab. in arena pr. Nakarbai-Chaduk; sub finem m. Apr. fruct. maturesc. — Statura robusta ab omnib. specieb. mihi notis primo intuitu diversa; caet.

3. MERENDERA PERSICA Boiss. in Kotschy pl. Pers. bor. 1847. — Boissier diagn. pl. nov. XIII. p. 37.

M. bulbo elongato apice attenuato tunicis fuscis secus scapum productis vestito, vagina tubulosa integra apice oblique truncata membranacea pallide fusca scapum usque ad foliorum ortum cingenti, foliis 3—4 crassiusculis lineari-lanceolatis attenuatis acutis erecto-patulis glabris flore intra folia breviter pedunculato, perigonio ad basin usque sexpartito unguibus longissimis filiformibus laciniis anguste oblongo-linearibus elongatis omnibus in ungues sensim attenuatis exauriculatis, filamentis usque ad laminae tertiam partem inferiorem adnatis parte libera brevissimis, antheris lutescentibus linearibus elongatis paulo supra basin filamento adnatis, stylis tribus filiformibus a basi distinctis, carpellis ovatis basi adnatis superne liberis attenuatis acutis.

Hab. in Persia prope Teheran Kotschy Nr. 80. — Species ex speciminibus fructiferis perigonia sicca retinentibus et quoad radicem incompletis descripta et ideo observationi ulteriori commendanda. Scapus fructifer 4—5 pollicaris, folia 3—4 pollices longa inferne circiter 3 lineas lata. Perigonii laciniae e sicco $2^1/_2$ pollicares angustissimae. Antherae $4^1/_2$—5 lineas longae. A M. Caucasica cui habitu et florum magnitudine affinis est differt antheris longe linearibus nec breviter oblongis basi sagittatis. M.

Aulica et M. sobolifera quam e descriptione solum novi quoque antheris ellipticis filamento multo brevioribus; M. filifolia antheris linearibus donata foliis angustissimis a nostra specie distinguuntur.

4. MERENDERA SOBOLIFERA. — Irmisch Naturf. V. I. tab. I. fig. 31—39.

Tribus V. *VERATREAE* Nees.

(Knth. en. IV. 179. — Walp. Ann. I. 876.)

XXI. SCHOENOCAULON *A. Gray*.

1. SCHOENOCAULON TEXANUM Ad. Scheele. — Beitr. z. Fl. v. Texas in Linn. XXV. p. 262. — Acaule bulbosum facie Triglochinis. *Bulbus* ovatus tunicatus, tunicae badiae margine lacerae. *Scapus* bipedalis simplicissimus erectus anceps, spiciger inferne purpurascens, b. angulis parce pilosis caeterum nudus. *F.* omnia radicalia caricina arida glabra multinervia, nervis prominulis, marg. sursum scabra ap. truncata 2 lineas lata scapum longitudine aequantia. *Flores* numerosi hermaphr. parvi virides sessiles spicam densifloram 3—4 uncialem formantes. Calyx herbaceus 6-sepalus persistens bractea membranacea ovata stipatus, sep. viridia lin-oblonga obtusa obsolete nervosa eglandulosa, b. vix coalita, erecto patentia. *Stam.* exserta 6 sepalis duplo longiora. Filam. subulata inferne sensim dilatata. Antherae reniformes magnae dorso medio affixae, loculis ap. confluentibus, *Ovaria* 3, angulis internis concreta sepalis longiora staminibus breviora stylis 3 brevibus ap. divergentibus apiculata. Stigmata minuta. Capsula ... — In pascuis aridis pr. Neubraunfels Lindheimer Apr. — Sch. gracile A. Gray (Knth. en. IV. 158) diff. f. angustioribus vix lineam latis scapo brevioribus.

XXII. VERATRUM *Tournef.*

(Knth. en. IV. 185. — Walp. Ann. I. 876.)

1. VERATRUM NIGRUM. — Irmisch Naturf. V. I. tab. I. fig. 40—49.

CHLOOPSIS et TRICORYNE.

Hasskarl in Regensb. Fl. 1851. p. 484.

A *Commelynaceis* ad *Melanthaceas* conferendae.

1. CHLOOPSIS CAULESCENS Bl. (Schultes syst. VI. p. 1691). — Sequitur l. c. descr. pl. ampla plantae Junghuhnianae. — Hab. in Javae silvis montosis inter 4—6000, altitudinem, regione nubium ubi e Jungermanniis quae folia hinc inde obtegunt concludendum est, nam locum natalem Jungh. haud adnotavit.

Ordo XXXV. UVULARIEAE *A. Gray*.

(Knth. en. IV. 194. — Walp. Ann. III. 650.)

SANDERSONIA *Hook.*

Hook. bot. mag. tab. 4716.

1. SANDERSONIA AURANTIACA Hook. l. c. (Cfr. supra sub *Liliaceis* pag. 100.)

LITTONIA *Hook.*

Hook. bot. mag. tab. 4723.

1. LITTONIA MODESTA Hook. l. c. tab. 4723. (Cfr. supra sub *Liliaceis* pag. 101.)

METHONICA *Herm.*

(Knth. en. IV. 275. genus ad Liliaceas refert.)

1. METHONICA VIRESCENS var. Plantii Planch. — Fl. des serres IX. tab. 865. — Flore majore, laciniis perianthii inferne extusq. flavidis. — Meth. Plantii hortulan.

2. METHONICA (*Gloriosa* Linn.) SUPERBA Linn. — Wight Ic. tab. 2047.

V. DISPORUM *Salisb.*

(Knth. en. IV. 206.)

Icones addendae.

DISPORUM LESCHENAULTIANUM Don. — Wight Ic. tab. 2048
DISPORUM MYSORENSE R. W. — Wight Ic. tab. 2049.
DISPORUM CEYLANICUM R. W. — Wight Ic. tab. 2050.

Ordo XXXVI. JUNCACEAE *Ag.*

(Knth. en. III. 295. — Walp. Ann. III. 650.)

I. LUZULA *DC.*

(Knth. en. III. 295. — Walp. Ann. III. 650.)

1. LUZULA SICULA Parl. — Parlatore nuovi genere e specie di piante monocot. 1854. pag. 59.

Anthela subcymosa, decomposita, pedunculis tenuib. suberectis, 1—2 longioribus saepe 1—2 ramulos erectos unifloros sub ap. gerentib., floribus 2—5 subcapitato-congestis, perigonii phyllis inaequalib., exteriorib. breviorib., mucronato-aristulatis, interiorib. acuminato-mucronatis, subaristatis sublaceris, filamentis brevib., anthera triplo breviorib., capsulis ovato-subrotundis triquetris, b. tricostatis obtusis mucronatis, perigonio brevioribus, seminum appendicula brevissima, calamis firmiusculis, f. latiuscule linearibus, margine pilosis, ore barbatis, rhizomate repente.

Luzula maxima Guss. fl. Sic. pr. I. p. 437. — *Luz. sylvatica* Bertol. — *Luz. Graeca* Guss. fl. Sic. in add. et emend. p. 813; Parl. fl. Palerm. I. p. 340; excl. syn.

Hab. in locis fruticosis in montib. Siciliae. — Floret Majo—Junio.

2. LUZULA ANTARCTICA Hook. — Gay fl. Chilena VI. p. 139.

Pusilla caespitosa; f. late lin-subulatis, concavis b. versus ciliatis; culmo gracili, filiformi, panicula ovata, densissima lanata, bracteolis foliisq. perigonii subaequalib., superne scarioso-membranaceis, inferne medioque coloratis, marginib. in lacinias piliformes fimbriato-laceras, apicib. hyalinis; caps. elliptico-subrotundata, perigonio dimidio breviore; stigmatib. 3 sessilib., filiformib.

(Df. ?) *Luz. antarctica* Dalt. Hook., fl. antarct. p. 550.

A Dalt. Hook. in promontorio Horn detecta.

Icon addenda.

LUZULA ALOPECURUS Desv. — (Kunth synops. III. p. 314). — Dumont d'Urville voy. au pôle Sud, bot. par Decaisne p. 16. monocot. t. 5. f. B. — Hook. fl. Ant. p. 358.

III. JUNCUS *Linn.* ex p.

(Knth. en. III. 315. — Walp. Ann. III. 653.)

1. JUNCUS COMMUNIS E. Mey. — Meyer in pl. Muellerianis, Linn. XXVI. p. 243.

α. effusus. J. effusus L.

β. subglomeratus.

γ. robustus. J. robustus E. Mey. quond.

Forma mihi antea ignota, fl. fructuque omnino non diversa a legitimo Junco communi, spatha subpungente, anthelaeq. ramificatione simillima Junco maritimo. An hybrida stirps? Ad rivulos montium Lofty-ranges (F. Muell.) Van Diemensland (Stuart). β. γ. et forma nova, Van Diemensland (Stuart).

2. JUNCUS REVOLUTUS R. Br. pr. p. 259. — E. Meyer in pl. Muellerian. in Linn. XXVI. p. 245. — J. Brownii F. Mueller. — Ad riv. Tamar Van Diemensld. etc. — Cl. Müller nomen mutandum esse censuit utpote ineptum, quia folia non revoluta sed convoluta essent. Mihi aptissimum videtur. Sunt enim etc.

3. JUNCUS CHILENSIS Gay. — Gay fl. Chilena VI. p. 146.

Caespitosus; culmo foliato; vaginis tereti-compressis striatis, inferiorib. aphyllis; f. teretib. subsetaceis, obsolete articulatis, anthela terminali, cymosa, subbrevioribus; capitulis globosis sessilib. et pedunculatis; staminib. 6 perigonium aequantib.; involucro monophyllo corymbo longius, foliis simili; sepalis aequalib. interiorib. oblongo-subobtusis, marginib. membranac., exteriorib. oblongo-lanc., acuminatis; capsula oblonga, triangulari, mutica, perigonii longitudine.

Species valde affinis J. alpino Vill. et J. multicipiti, Kze. In Cordilleras de San Fernando.

4. JUNCUS OLYMPICUS Schott. — Schott Amalecta bot. I. 1854. p. 3.

Foliis intus septatis, extus striatulis, caeterum laevibus; perigonio capsula $1/3$ breviore, phyllis aequilongis, omnib. acutis et ap. ipso breviter mucronatis.

Perennis, parvulus (uncialis et ultra), adscendens, b. vaginis follor. rubens. Culmi compressi, 3—4 folii. F. disticha, complanata longe subulata, falcata ap. acuto rubro tincta. Anthela paupera, utplurimum triflora, constans florib. 2 sessilib. et tertio terminali pedicellato. Perig. brunneum, albido marginatum. Caps. atra, anguste ovoideo-pyramidata, mucronata. Sem. reticulata. — Hab. in Olympo Bithyniae. — J. lamprocarpus Ehrh. proximus, diff. perigonio et foliis.

FLAGELLARIEAE Endl.

(Tribus Juncacearum Knth. en. III. p. 369.)

IX. FLAGELLARIA *Linn.*

(Knth. l. c. 369.)

FLAGELLARIA L. (char. reform.) — Hooker, on Chortodes, a subgenus of Flagellaria in Kew garden misc. VII. 198.

Perianth. persistens; lacin. 6, 2-seriatis. Stam. 6 hypog.; filament. filiformib., liber.; anther. oblongis, med. dorso affixis, longitudin. dehisc. Ovar. liber. sessile 3-loculare; ovul. in loc. solitariis basilarib., anatropis; stigmatib. 3, patulis filiformib. Bacca coriac., pisif., 1—3 loba, 1—3

locularis, stigmatib. coronata. Semina oblonga v. subglob.; testa membranac., tenui; hilo basilari, chalaza orbiculari; embryone lenticulari, minimo.

Herbae perennes; caule erecto v. sarmentoso; f. sparsis, longe vaginantib.; vaginis integris v. fissis, striatis plicatisve, interd. in cirrhos desinentib.; fl. bracteolatis, in ramis paniculae amplae decompositae sessilib., parvis, viridibus albisve.

1. Subgenus EUFLAGELLARIA.

Perianthii laciniae interiores exteriorib. majores, submembranaceae. Bacca 1-locul., 1-sperma.

Herbae sarmentosae v. scandentes, f. striatis sp. in cirrhos desinentib., vaginis plerumq. integris.

2. Subgenus CHORTODES.

Perianthii laciniae interiores exteriorib. aequilongae. Bacca 3-locularis, 3-sperma.

Herba erecta, f. plicatis, vaginis ad b. fissis.

1. FLAGELLARIA (*Chortodes*) PLICATA Hook.

Erecta, f. late elongato-lanc., longe acuminatis, creberrime plicatis et longitudinaliter nervosis nervis primariis minute scaberulis venulis transversis convexis, vagina fissa marginib. membranac. superne in auriculas obtusas utrinq. dilatata, paniculae ramis puberulis, perianthii laciniis ovato-subulatis.

Habit. In ins. Pinorum (isle of Pines) pr. sp. austr. insulae Novae Caledoniae ad silviam rivulos. — Herba elata, 5-ped. robusta. Caulis erectus, indivisus? F. pedal. et ultra, 3—5 p. lata, creberrime plicata, plicis 20—30, vagina spithamaea et ultra subtilissime asperula striata, ligula breviss. membranacea. Panic. pedalis ampla ramosiss., ramis et ramulis saepe flexuosis angulatis puberulis. *Fl. parvi*, (1—2 l. l.) sessiles, bracteola minuta suffulti; bracteola ramulo paniculae adnata, dentiformi. Perianth. viride, b. late campanulatum. Fil. filif., perianthio duplo longiora. Anth. filamentis aequilongae, lin-oblongae, dorso supra b. filamento insertae. Ovar. glob.; stigmatib. 3 filif. coronatum. Bacca immatura, 1/10 p. lata triloba.

XEROTIDEAE Endl.

(Trib. Juncacearum Knth. en. III. 370.)

Sonder in Linn. XXVIII. 218.

XI. XEROTES *R. Br.*

(Knth. en. III. 371.)

Sonder in Linnaea l. c. 218.

1. XEROTES FILAMENTOSA Brongn. in Duperrey voy. Botan. Phanerog. t. 35. opt.! Kunth Enumerat. III. p. 373. — Sandberg (Adelaide), Apr. (Dr. Behr). Inter portum et urbem Adelaide, Mart.; ad lacum Victoriae; Reedy creek; Guichen-bay (Dr. F. Müller). In Nov. Holland. subtropica leg. cl. T. L. Mitchell!

Variat: foliis angustioribus et latioribus, capitulis masculis solitariis vel 2—6 remotis superimpositis, globosis, oblongis nunc pluribus confluentibus lineari-oblongis 3—4-pollicaribus.

Rhizoma repens. Folia in spec. minoribus pedalia, in maximis bipedalia scapo semper longiora. Bracteae floribus longiores subulatae. Flores albi. Perigonium exterius 3-phyllum hyalinum; interius e foliolis 3 basi cohaerentibus duplo majoribus albo-coloratis constat. Planta feminea deest. — An eadem ac X. leucocephala R. Br. l. c.?

2. XEROTES FRAGRANS F. Müll.

Acaulis, foliis distichis linearibus rigidis subtus convexis striatis margine serrulato-scabris, apice plano bidentato sinu acuto, basibus dilatatis laceris, scapo compresso nudo, panicula mascula foliis multo breviore laxa racemosa, ramis primariis saepius oppositis, reliquis plerumque alternis, pedicellis solitariis binis ternisve erecto-patulis perigonio 2—4-plove longioribus bracteam aequantibus superantibusve, perigonii foliolis subaequalibus lineari-oblongis, bracteis omnibus hyalinis.

In planitie versus Gawlertown, Julio (Dr. F. Müller). — Folia 1—1½-pedalia, lineam lata, rigida, incurva, latere interiore plana. Scapus 2—3-pollicaris, panicula subaequilonga, demum effusa terminata. Bracteae inferiores longiores lineari-lanceolatae, superiores subulato-acuminatae, pedicellum aequantes vel breviores. Perigonium patens; foliola 2 lin. longa, stamina 6 duplo superantia. Flores feminei desunt.

3. XEROTES DURA F. Müll.

Foliis elongatis linearibus rigidis coriaceis dorso convexiusculis antice planis apice tabescente obtusis subdenticulatisve margine laevibus basibus dilatatis laceris, panicula verticillato-ramosa foliis multo breviore, glomerulis florum sessilibus, bracteis acutis adpressis perigonium aequantibus, perigonii subglobosi foliolis subaequalibus obtusis, staminibus perigonio subbrevioribus, capsulis subtrigonis laevibus.

In montibus sterilibus Lofty-ranges, Novb.; inter Macclesfield et Villnuga, Janr.; Cudnaku (Dr. F. Müller). — Folia 1½—2 pedes longa, 1½—2 lin. lata, subtiliter striata, margine non incrassata. Scapus compressus vel subtrigonus, rarius teretiusculus, 2—3-pollicaris, panicula 3—4-pollicari, simplici, verticillato-ramosa terminatus. Glomeruli magnitudine pisi majoris. Perigonium masculum lineam longum, foliolis concaviusculis ovatis obtusis, tribus exterioribus subcoloratis margine pallide, tribus interioribus apice summo tantum coloratis. Stamina 6, filamentis brevibus basi latioribus, alternis brevioribus, antheris minutis. Perigonii feminei foliolis basi connatis, cordato-ovatis obtusis, lineam longis. Ovarium triloculare, loculis 1-ovulatis, 1—2 saepe abortientibus. Capsula circ. 2 lin. longa et lata, stylorum basi brevissime apiculata, laevis in sicco quasi pruina levissima obducta; valvae virides margine albidae, itaque fructus ex 6 striis viridibus et 6 albis tinctus adparet. Semina matura desunt. — X. rigidae R. Br. affinis.

4. XEROTES LONGIFOLIA R. Br. l. c. p. 262. — *Lomandra longifolia* Labill. Nov. Holl. I. tab. 119. — Inter montem Gambir et Rivoli-bay. In collibus ad ripas fl. Yarra et in udis prope St. Kilda, Septemb. (Dr. F. Müll.) — Variat panicula stricta 1—2-pedali. — X. arenaria Schnizl. Icon. famil. I. 51 b. ab X. longifolia R. Br. non diversa videtur.

CALECTASIEAE Endl.

(Juncacearum trib. Knth. en. III. 377.)

XIV. CALECTASIA *Brown.*

(Knth. l. c. 377.)

1. CALECTASIA CYANEA R. Br. l. c. — Sonder in Lin. 1856. p. 222.

Perigonii tubo basi villoso apicem versus subpubescente, limbi laciniis (azureis) tubum aequantibus intus ad basin glabris, filamentis filiformibus glabris.

2. CALECTASIA INTERMEDIA Sond. l. c.

Perigonii tubo basi villoso apicem versus pubescente, limbi laciniis (azureis) tubum aequantibus intus basi puberulis, filamentis basi pilosis.

Inter „Grampians et Victoria range", Nov. 1853; leg. Dr. Ferd. Müller. — Fruticulus ramosus facie C. cyaneae. Folia in spec. a cl. Müller missis adpressa, ab iis C. cyaneae

non diversa. Flores terminales solitarii, azurei, adulti margine interdum pallidiores; laciniae tubum aequantes (5—6 lin. longae), subtus ad costam adpresse pilosae. Filamenta brevissima, basi pilosa, pilis erectis. Stylus et ovarium ut in antecedente.

3: CALECTASIA GRANDIFLORA Preiss. (Walp. Ann. I. 882. 1.) — Sonder l. c.

Perigonii tubo striato glabro ima basi villoso, limbi laciniis (purpureis subvariegatis) tubum subduplo superantibus intus ad basin vel a basi ad medium usque sublanato-pubescentibus, filamentis basi dilatatis glabris.

Hab. Darlings-range, district. Perth Australasiae.

Subclassis VIII. ENANTIOBLASTAE Mart.

Ordo XXXVII. COMMELYNACEAE Rchb.

(Commelyneae R. Br. — Walp. Ann. III. 656.)

GENERA BRASILIENSIA.

Mart. Fl Brasil. fasc. XV. tab. 239—270.

Stam. 6 v. 5, omn. fertilia, antherar. loc. poro apicali aperti	*Dichorisandra* Mik.
Stam. 6 omn. fertilia, antherar. loc. rima dehiscentes:	
perig. baccans, caps. 3 loc.	*Campelia* Rich.
perig. marcesc., caps. 3 loc.	*Tradescantia* L.
perig. marcesc., caps. 2 loc.	*Dithyrocarpus* Knth.
Stam. 1—3 omn. fertilia	*Callisia* Löfl.
Stam. 6 v. 4, quorum nonnulla sterilia, caps. 3-loc., 3 valvis	*Aneilema* R. Br.
Stam. 6 v. 5, quor. nonnulla sterilia, caps. 2 loc. 2 valvis	*Commelyna* Linn.

DICTYOSPERMUM R. W.

Wight Ic. VI. p. 29.

Icones addendae.

DICTYOSPERMUM MONTANUM R. W. — Wight l. c. t. 2069. — (Aneilema montana R. W. in Wall. Cat.)

DICTYOSPERMUM OVALIFOLIUM R. W. — Wigth l. c. tab. 2070.

DICTYOSPERMUM PROTENSUM R. W. — (Aneilema protensa Wall. Cat. 5218) — Wight Ic. tab. 2071.

HETEROCARPUS R. W.

R. Wight Ic. VI. p. 29.

Icones addendae.

HETEROCARPUS HIRSUTUS R. W. — Wight Ic. tab. 2067. 1.

HETEROCARPUS GLABER R. W. — Wight Ic. tab. 2067. 2.

IV. ACLISIA E. Mey.

(Knth. en. IV. 74.)

Icon addenda.

ACLISIA INDICA R. W. — Wight Ic. tab. 2068.

DICHOSPERMUM *R. W.*

Wight Ic. VI. p. 31.

Icones addendae.

DICHOSPERMUM LANCEOLATUM R. W. — Wight Ic. tab. 2078. 1.
DICHOSPERMUM JUNCOIDES R. W. — Wight Ic. tab. 2078. 2.
DICHOSPERMUM REPENS R. W. — Wight Ic. tab. 2078. 3.

GOVINDOVIA *R. W.*

Wight Ic. VI. p. 34.

Icon addenda.

GOVINDOVIA NERVOSA R. W. — Wight Ic. tab. 2080.

I. COMMELYNA *Linn.*

(Knth. en. IV. 35. — Walp. Ann. III. 656.)

Schlechtend. observat. in pl. hort. bot. Hal. in Linnr. XXVI. p. 453.

1. COMMELYNA DELICATULA Schlechtdl.*). — Regel in Gartenfl. III. p. 340. tab. 104 a. b. c. d. e. — Caulib. repentib. glabris, juniorib. puberulis, foliis breviter petiolatis, ovatis v. ovato-oblongis, acutis undulatis, supra margineque scabriusculis, subt. puberulis; vaginis pubescentib., antice oreque ciliatis; spathis oppositifoliis, cordato-lateq. ovatis, complicatis, acutis, puberulis; pedunculis in spatha geminis glabris, incluso 3-floro, exserto 1-floro; fl. hermaphroditis masculisq.; sepalo interiore impari sessili, lanceolato, incurvo. — Ex horto bot. Halensi nobis missa. — Commelynae communi haud aliena.

1 a. COMMELYNA PROCURRENS Schlchtd. — Linnaea XXV. p. 183. — Caules teretes ramosi, ad genicula radicula agentes, longe procedentes patentim pilosi. Vaginae breves cum lamina duplicis generis indumento obsitae insuperq. c. petiolo pilis nonnullis longioribus articulatis majore ex parte rufo-fuscescentibus ciliatae. Lamina subcordato-ovata, b. in petiolum brevem et latum subcuneata, 7—9 nervia, obtusiuscula pube brevi in margine densiore et pilis paucis longioribus intermixtis obtecta. Pedunculi breviter patentimq. pubescentes terminales, nunc unicam nunc 2—3 inflorescentias ferentes, infima e summi folii vagina emergens, reliquae e bractea vaginaeformi, rarius laminam gignente, late lanceolata, longitudinaliter fissa, ap. leviter extus curvata. — Pedunculus c. bractea brevior sit involucrum saepius in vagina subsessile videtur, quod pubescens et pilosum praesertim in utroque latere, marg. vix ciliolato, complicatum obovato-triangulum, marg. supero curvato et aperto, lateralib. clausis, angulo altero (terminali) acuto, altero obtuso. Tres continet flores pedicellatos, quorum unus alterve masculus, reliqui hermaphr., pedicello florentis elongato geniculato, albido, parte supera ad geniculum usque exserta. Sep. 3 inaequalia pallide coerulescentia, unum ovatum acutum fere complicatum, lateralia 2 convexa fere subrotunda obtusissima. Petala 3 valde inaeq., 2 calycem longe superantia, longe unguiculata, lamina fere reniformi-orbiculari laete coerulea, tertium fere lanceolatum obtusum calycem aequans. St. 6 inaeq., 3 in medio flore erecta fertilia antherifera, anthera medii longiore, loculis b. divergentib. curviusculis, intense lutea, lateralium antherae ovales coerulescentes minores; 3 sterilia, petalis majoribus saepe adpressa porrecta, corpusculo fere hippocrepico 4-lobo pallide sulphureo terminata, lobis infimis deorsum protractis ap. globulosis, superis fere obsoletis et sinu leviter intus curvato ab invicem sejunctis, lobos inter in utroque

*) Secundum cl. Koch in diario suo bot. Wochenschrift 1859. p. 327. Schlechtendalius Commelynam quamdam delicatulam nominatam publicavit sed Kunthius Gulliciam delicatulam cum qua Regel nomen fortasse confuderit. Planta sua vero eadem est quam Commelyna procurrens Schlechtend., quam supra sequitur descriptio Schlechtendaliana.

margine macula globosa grumosa intense lutea. Ovarium viride, stylus erectus apice uti et filamenta fertilia leviter incurvus et cum his intensius coeruleus quam filamenta sterilia.

2. COMMELYNA GELATINOSA Edgew. — Edgeworth Catal. of Banda pl. in Asiatic. journ. of Bengal. (1852) vol. 21. p. 177.

Caulib. ramosis semi-teretib. uno latere plano scabro pubescente, f. oblongo-lanc. acuminatis subinaequalib. subt. glaucis minute puberulis supra scabris brevit. petiolatis vaginis striatis marg. fisso ciliatis fauce barbatis, spathis falcatis acutis turbinato-cucullatis 1-rarius bi-pedicelliferis ambobus floriferis, caps. 3-loculari 3-sperma striata.

Hab. in rupib. insularum „Banda". — Caules ramosi geniculati diffusi subascendentes vaginae breves striatae scabriusculae marg. ciliatae ore barbatae, f. oblongo-lin. 4—5 pollicaria. Spathae term. subcorymbosae pedunculatae bract. hyalinis ovatis pedunculum intra vaginam amplectentib., falcatae acutae turbinato-cucullatae striatae parce pilosae succo gelatinoso plenae. Pedicelli singuli inclusi rarius gemini (altero exserto) 3—4 flori quorum plerumq. unus tantum fructifer; sep. 3 hyalina, superum ovatum acutum erectum, 2 concava, obtusa deflexa pr. sp. in unum coalita, cyathum emarg. formantia. Pet. 2 longe unguiculata limbo orbiculato pallide coerulea, tertium minimum hyalinum ellipticum acutum, stam. 3, duor. antheris ovatis coeruleis, tertii flavâ (valvis nigrescentib.) late sagittata b. deformatâ dorso glandulosa. Parantherae cruciatae glanduliferae. Stylus in alabastro circinnatim, defloratione spiraliter tortus. Caps. 3 locul., 3-sperma tenuiter striata in spatha nidulans, semina majuscula nigra non lucida. — Proxima C. Donii, striatae et angustifoliae, differt tamen folior. superficie scabra aliisq. characterib.

3. COMMELYNA PALEATA Hassk. — Hasskarl in pl. Jungh. III. p. 139.

Caule adscendente, glabro, ramoso; f. breviter petiolatis, oblongo-lanc., superiorib. angustiorib., longit. acuminatis, supra et margine scabris, subt. glabris; vaginis glabris, ad suturam vix puberulis, fauce pilis singulis albidis tantum ciliatis; involucris pedunculatis terminalib. aut in ap. ramor. axillarib., cucullatis, turbinatis, acutis, ad suturam subcordatis, ext. in medio paleis albis acuminatis crebris obsessis; pedicellis in involucro binis, altero sterili paulo minori, altero fertili 2—3 floro; calycis foliolo impari interiori lanceolato.

Hab. in m. calcareo Gamping pr. Jogja-Kerta Javae centralis. — Herbae; caulis b. procumbens etc.

4. COMMELYNA INTERMEDIA h. Hal. — Cfr. v. Schlechtdl. in Linn. XXIV. p. 655. plantae descr. — Ex h. Monacensi sub C. elegantis nom. quondam accepimus, sed ab Humboldtiana pl. plane diversa est.

Icones addendae.

COMMELYNA BENGALENSIS Linn. — Wight Ic. tab. 2065.
COMMELYNA POLYSPATHA R. W. — Wight Ic. tab. 2066.
COMMELYNA CLANDESTINA h. Berol. (Knth. en. IV. p. 46.) — Cfr. v. Schlechtd. in Linn. XXVI. p. 654. pl. descr.
COMMELYNA SCABRA Benth. — (Cfr. Knth. en. IV. p. 56 et p. 660). — Paxt. fl. gard. III. xylogr. f. 234.

II. CALLISIA *Loefl.*

(Knth. en. IV. 61.)

v. Schldl. in Linn. XXV. p. 612—621. Animadvers. quaedam in Callisiae genus.

Ex nostra sententia haec C. *delicatula* (Knth. en. IV. 63.) cum C. *umbellulata* Lam. jungenda erit, reposita interd. C. *monandra* (Knth. l. c. p. 62.) iterum observanda. C. *umbellulata* non solum plur. insular. Antillar., sed etiam regionis Columbicae est

civis uti e variis speciminib. ex hac regione ortis a Moriśio et Wagenere collectis compertum habemus. — Callisiae genus in 2 dividendum sectiones, altera florib. intra vaginam quasi occultis, altera fl. pedicellatis e vagina exsertis et paniculam fere elongatam in superiore caule formantib. insignia. — Cfr. l. c. in fine.

III. ANEILEMA *Knth.*

(Knth. en. IV. 64. — Walp. Ann. III. 657.)

§ 1. florib. fasciculat.

1. ANEILEMA OCHRACEUM. — Dalzell in Hook. journ. Kew gard. misc. III. 135.

Caulib. erect. simplicib. teretib. glabr.. folios., f. vaginatis alternis, inferior. ovato-oblongis, superior. cordato-ovat. acut. minorib., pedicell. axillarib. terminalibusque pluribus (6—7) fasciculat. med. articulat., parte infer. hirtellis calycis (sep. exter.) laciniis glabris, corollae petal. rotundatis ochraceis, antherar. fertil. filamentis barbatis.

Stam. 6, quorum 3 effoeta glandulis bilobat. instructa, 3 fertilia.. Styl. brev. stigma simplex. Ovar. oblong. trigon. Caps. cartilaginea, glabra, loculic. dehisc. triloc. polysperma. Sem. in quoq. loculo 7—8 biserial., valde inter se compressa, lateralib. omnib. impressione umbiliciformi. Cresc. in loc. saxosis humidis Concani austral.; fl. temp. fluviali.

2. ANEILEMA VERSICOLOR. — Dalzell in Hook. misc. III. 136.

Ramosum, ramis erect. teretib. striat. patenti-hispidulis folios., fol. altern. bifariis distantib. lanceolato-acuminatis glabr. amplexicaulib. subt. 5—7-nerv. supra striatis vaginis longiusc. hispidulis sulcato-striat., pedicell. axillar. fasciculat. 3—4-nis folio longiorib. med. articulat. parte super. glabris, infer. pubesc., sepal. exterior. petaloid. $^1/_3$ orbiculat. breviss. unguiculat. ochraceis diametro 3-lin. — Capsula lin. semina 1-serialia.

Cresc. cum praecedente (Aneil. ochracea) in loc. saxosis humidis Concani austr. Fl. duplo longiores quam in A. ochracea.

3. ANEILEMA PAUCIFLORUM. — Dalzell in Hook. journ. Kew gard. misc. III. 136.

Biped., tota pl. (vaginar. ore excepto) glabra, b. ramosa, ram. strict. erect. teretib. striat., f. lin. acuminat. nitid. plan. 8 p. long., 3 lin. l. internod. duplo longiorib., inferior. vaginis fiss, superior. subito in bract. floralib. brevib. vaginantib. transeuntib., pedicell. ex bractear. axill. solitar. gemin. v. ternis $^1/_2$ p., 1 floris, bractea subduplo longiorib. med. bis articulatis sp. vers. puberul., ovul. in locul. solitar.

Calyc. lacin. exter. ovato-oblong., puberul., fr. paulo longiores. Stam. 2, fertil.; anth. aurantiacae. Stam. effoeta glandulaef. 4, glandulae flav. Styl. coeruleus. Caps. obt. trigona, rotundata glabra nitida; ovula in quoq. loc. solitar.; sem. tuberculata. — Aneilemati vaginato Br. affine, sed f. multo longiora, et caps. loculi 1-spermi. — Cresc. in Concano australiore; fl. temp. pluviali.

§ 2. florib. paniculat.

4. ANEILEMA ELATUM. — Dalzell in Hook. journ. Kew gard. misc. III. 137.

3—4 ped., caule erecto tereti glabro folioso, f. lin-lanc. acut. glabr. plan. albo-marginatis, marginib. undulat., 6—8 p. long., 2 p. l., vagin. integr. pollic. ore puberulis v. subglabr.. peduncul. terminalib. dichotomo-ramosis, ramis ramulisq. distentib. pauciflor. b. bract. integr. vaginantib. suffultis, florib. ternis.

Sep. exteriora prof. concava, oval. obt., interiora petaloidea obovato-cuneata, concava sub anthesi reflexa. Stam. fertil. 3. Stam. glanduliform. 3 breviora, glandulae luteae, cordato-bilobae: filam. omn. infra med. barbata. Caps. sep. exter. inclusa, loculis 3-sperm. — Cresc. in silv. umbrosis regni Warreensis; f. Aug. — A. giganteo, R. Br. et A. elato, Knth. en. IV. 70. valde affine, a priore differt staminib. omnib.

WALPERS.

ANNALES BOTANICES SYSTEMATICAE.

TOMI SEXTI

FASC. II.

AUCTORE

DR. CAROLO MUELLER BEROL.

LIPSIAE.

SUMPTIBUS AMBROSII ABEL.

1861.

1 Thlr. 6 Ngr.

Jede Zusendung oder Bemerkung die Annales botanices systematicae

barbatis; ab A. elato, Enth. sepal. exterior. non linearib. Spec. haec fructib. coerul. metallicis rotundis verosimiliter Commelyna elata Vahl est, haud recta descripta, quare nomen specificum est conservatum.

5. ANEILEMA CANALICULATUM. — Dalzell in Hook. J. Kew gard. misc. III. 137.

6—7 pollic., radice fibrosa, caule simplicit. ramoso, erecto,, striato, uno latere linea pubesc. alternat. notato, f. infer. l. lin-lanc., super. cordato-oblong., omnib. amplexicaulib. glabr. 10—18 l. long. 4—5 l. l., med. canaliculat., pedunc. terminalib. et ex f. superior. axill. solitar. v. gemin. dichotomo-ramosis paucifloris, florib. longiusc. pedicellat. bifariis distantib., pedicellis fructu longior., bract. minutis persist. oppositis.

Sep. exter. sub anthesi patent., inter. majora, petaloid. rotundata. Stam. perfecta, 3 fertilia, anth. sp. apiculat. cyaneis; glanduliform. 3 breviora, stylum aeq., glandul. 3-lobat. alb.; filam. omn. barbata. Caps. oblonga acute trigona, sepal. exterior. duplo longior, locul. 4—5 spermis; semina 1-serial. Fl. cyanei. — Cresc. in provinc. Malwan; fl. temp. pluviali.

6. ANEILEMA DIMORPHUM. — Dalz. in Hook. j. Kew gard. misc. III. 138.

Totum, (exc. vaginar. ore ciliato) glabrum, pedale, radice fibrosa, b. parce ramosa, ram. erect. teretib. striatis, internodiis uno latere linea pubesc. notatis, f. inferiorib. lin-acuminat., superior. lanc. acutis, omnib. amplexicaulib., florib. terminalib. dichotomo-paniculat. pauc., paniculae ram. pedicellisq. b. bracteat., bract. minut. rotundato-cucullatis.

Sep. exter. ovata, obt., concava, sub anth. reflexa, inter. rotundata, b. cuneata petaloid. Stam. fertil. 3, anther. purpur., filam. med. barbat., stylo 4-plo longiorib. glanduliff. 3 breviora, fil. glabr., glandul. alb. 3-lobatis. Ovarii loculi 3-ovulati. Styl. brevis., strict. subul. Stigma simplex. Caps. sep. extor. longior, oblonga acuta, trigona. Fl. cyanei. — Cresc. in prov. Malwan; fl. temp. pluviali.

7. ANEILEMA SEMITERETES. — Dalz. in Hook j. Kew gard. misc. III. 138.

Caule erecto simplici tereti 2—5 p., glabro, f. pauc. subulat. carnosis semiteretib., vagin. integr., florib. terminalib. et ex folii supremi axilla dichotomo-paniculat., panicul. pauciflor., pedunc. pedicellisq. rubris, vaginis floralib. truncatis 1-dentatis.

St. fertil. 3, incumbent., sep. exter. opp., anth. fusc., filam. glabr.; sterilia 3, glanduliff., glandul. trilobat. albis, filam. omnib. ima b. coalitis. Ovar. ovale, stylo stricto paulo brevius, 3 loculare; ovula in quoq. loc. 6, biserial. Pet. obovata, cuneata, ap. mucronata, irreg. dentata. Fl. cyanei. — Crescit in Concano utroque, in loc. muscosis; fl. temp. pluviali.

§ 3. Florib. cymoso-racemosis.

8. ANEILEMA COMPRESSUM. — Dalz. in Hook. j. Kew gard. misc. III. 138.

Basi ramos. radicans, ram. adscendentib. compress simplicib. glabr., fol. bifariis brevib. 2—3 p. long., 4—5 l. l., ensiformib. obtusiusc. subcomplicat., super. minorib., vaginis undiq. hispid., pedunc. terminalib. et in bractearum vaginant. axill. pollic. plurifl., florib. racemos. br. pedicellat., sepal. exter. oblong. obtus. glabr., inter. petaloid. rotundat., roseis, ovulis in locul. ternis.

Anth. fertil. 2 albae, filam. alb., pil. roseis barbat. Stam. 1, depauperatum barbatum; glanduliff. 3 parce barbata, glandul. 3-lob. Caps. oblonga, sep. exter. persist. duplo longior, 9-sperma; cartilaginea. — Cresc. in prov. Malwan? fl. temp. pluviali. — A. nudiflore valde aff.

9. ANEILEMA FOLIOSUM Hassk. — Hasskarl in pl. Jungh. II. p. 144.

Repens, f. b. amplexicaulib., sessilib., lin-lanceolatis, patentib., glabris; racem. terminalib. oliganthis, bracteatis; fructib. 3-locularib., loculis 2-spermis, calycis foliolis interiorib. aequalib., staminib. fertilib. binis.

Hab. Javae centr. montis Ungaram declivitates bor. pr. Medini, inter 3—5000' alt. — Herbae e caule centrali radiatim prorepentes, etc.

10. ANEILEMA DIVERSIFOLIUM Hassk. — Hasskarl in pl. Jungh. II. p. 142.

Pilosum, caule b. repente adscendente, f. infimis lato-linearib. acuminatis, ramis sessilib. amplexicaulib. oblongo-lanc. acutis s. acuminatis utrinq. glabris, fl. 4—6 in racemos terminales aut quid. in ramor. apicib. racemoso-collectis bracteatis, staminib. fertilib. binis, filamentis barbatis, seminib. in loculis binis, fructib. nitidis.

Hab. Javae centr. montis Ungaram declivitates bor. pr. Medini inter 3—5000' alt. — Herba b. procumbentes, dein adscendentes etc.

11. ANEILEMA LORIFORME Hassk. — Hasskarl in pl. Jungh. II. p. 143. — Hab. in Javae centralis montis Ungaran declivitatib. borealib. pr. Medini inter 3—5000' alt.

Herbae perennae, cespitosae, gramineae; radices fibrosae; caules plures erecti, subsimplices aut ramosi etc.

Maxime accedit A. siliculosum R. Br. (Kunth enum. IV. 68. 9). quod differt: filam. imberbibus, f. supra scabris, ensiformib.; caeterum differunt A. gramineum R. Br. (Knth. l. c. 14) filament. 3 fertilibus, f. subciliatis et tota pl. pilosiuscula; A. longifolium Hook. (Knth. l. c. 71. 31) paniculis submultifloris, staminib. fertilib. tribus.

12. ANEILEMA LATIFOLIUM R. W. — Wight Ic. tab. 2072.

13. ANEILEMA SCAPIFLORA R. W. — (Commelyna scapiflora Roxb., an tuberosa? Hamilt., Wall. Cat.; Murdania scapiflora? Royle.) — Wight Ic. tab. 2073.

14. ANEILEMA ENSIFOLIA R. W. — Wight Ic. tab. 2074.

15. ANEILEMA SECUNDA R. W. — Wight Ic. tab. 2075. 1.

16. ANEILEMA PANICULATA R. W. — Wight Ic. tab. 2075. 2. — (An herb. Wight in Wall. Cat. 5216?)

17. ANEILEMA VAGINATA R. R. (Wall. Cat. 5212 B. 1) — Wight Ic. tab. 2076. 1.

18. ANEILEMA TERMINALIS R. W. — Wight Ic. tab. 2076. 2.

19. ANEILEMA NANA Knth. — Wight Ic. tab. 2077. dextra.

20. ANEILEMA PAUCIFLORA R. W. — Wight Ic. tab. 2077. sinistra.

21. ANEILEMA LANUFOLIA (lancifolia?) — Griffith not. l. c. p. 236.

22. ANEILEMA CROCEA Gr. — Griffith notulae (1851) p. 235.

VII. DITHYROCARPUS *Knth.*

(Knth. en. IV. 76.)

Icones addendae.

DITHYROCARPUS PETIOLATUS R. W. — Wight Ic. tab. 2079.

DITHYROCARPUS ROTHII R. W. — Wight Ic. tab. 2080. dextra. — (Tradescantia paniculata Roth, non Roxb.)

DITHYROCARPUS UNDULATUS R. W. — Wight Ic. tab. 2080. sinistr.

VIII. TRADESCANTIA *Linn.*

(Knth. en. IV. 80. — Walp. Ann. III. 659.)

v. Schlechtend. in Linn. XXV. p. 186.

1. TRADESCANTIA IRIDESCENS Lindl. (Knth. en. IV. 85. n. 16.) — v. Schlechtdl. hort. Hal. fasc. III. p. 21. tab. XI. f. 1—6. cfr. l. c. plantae nov. descript. — Illis adjicenda est speciebus quae c. Tr. crassifolia conveniunt foliis crassiorib. et caulibus persistentib., a quib. removendae sunt perennes, quar. caules quotannis novi e terra surgunt et peracta fructificatione pereunt, ut Tr. Virginica, pilosa, Lyoni aliaeque.

var. *glabrescens* Regel h. bot. Petrop. 1857. — Haec varietas vel potius forma et a diagnosi Lindleyana (Bot. Reg. 26, tab. 34) et a descriptione Schlechtendaliana (Hort. Hal. fasc. 3, 21, tab. 11) differt foliis subtus glaberrimis vel hinc inde pilo rarissimo consperais margine tantum molliter denseque ciliatis. Caulis inferne glaber, superne pilis patentibus mollibus pubescens. (Kcke.)

2. TRADESCANTIA HYPOPHAEA C. Koch et Bouché ind. sem. h. Berol. 1855.

Procumbens; caules geniculati, unifariam pilosi; folia oblonga, acuta, hirsuta, vaginis villosis; pedunculi dichotomi, glaberrimi, ramis glandulosis; umbella 2—5 flora, glandulosa; flores parvuli; calyx longitudine corollam aequans.

Species a cl. Warszewicz e regionibus tropicis Americae in Germaniam allata, T. geniculatae Jacq. proxima, differt tamen caule unifariam piloso, foliis minoribus et umbellis glandulosis. — Caules procumbentes, imo dependentes, elongati, serie pilorum praediti, ceterum glaberrimi, nitentes, saepe brunnescentes; folia ovato-oblonga aut oblonga, 7—10 lin. longa, 4—6 lin. lata, pilis singulis tuberculis parvulis insidentibus vestita, margine brunneo-cincta, subtus violaceo-brunnea, internodia subaequantia, 3- aut 5 nervia, vaginae striatae, villis obsitae, lamina folii quadruplo breviores; pedunculi terminales, gemini, inaequales, folio breviores, dichotomi; bracteae dichotomiae geminae, lanceolatae, ramis subtriplo breviores. Pedicelli inaequales, floribus sesquilongiores; calycis sepala ovato-lanceolata, basi connata, nervo medio plerumque glandulifera; petala alba; stamina subaequalia, antheris subdicoccis, aureis; filamenta villis singulis obsita; ovarium trigonum, apice truncatum, stylo duplo brevius; ovula subglobosa, orthotropa; capsula ovata, vix trigona, vertice saepe pilis singulis obsita, stylo persistente coronata; semina compressa, medio impressa, subrotunda, grisea, subtiliter punctulata.

3. TRADESCANTIA ERECTA Jacq. Ic. 2, t. 2354. — Regel hort. bot. Petrop. 1857. — Cl. Kunth in En. pl. IV., 98 injuste ad hanc speciem ducit Cavanillesii iconem (Cav. Ic. tom. 1. 53, tab. 74) sub eodem nomine promulgatam, quae ad Tr. undatam Willd. pertinet. Differt enim haec species a Tr. erecta Jacq. praeter corollam roseam (nec coeruleam) pedunculo praeter pilos breves densos pilis multo longioribus hyalinis in sicco irregulariter perturbatis hirsuto (nec pilis brevibus tantum densis tenuibus non hyalinis pubescente). Id enim docet non solum icon Cavanillesii ipsa, sed etiam specimen a cl. Ortega olim cum Pallasio communicatum nunc in Herb. Hort. Petrop. conservatum. Praeterea stamina nostrae speciei a cl. Kunthio l. c. male describuntur. Filamenta enim coerulea (nec fuscescentia nec albido-barbata), staminum trium inferiorum sursum arcuata, duorum lateralium supra (sc. in latere interiore) a medio fere ad basim usque pilis longis coeruleis articulatis barbata, tertii medii paullo brevius glabrum; staminum trium superiorum breviorum minus sursum arcuata, duorum lateralium in medio (in latere exteriore) pilis coeruleis et flavis fasciculatis barbata, tertii medii paullo brevius in medio pilis flavis (inferioribus basi subcoerulescentibus) barbatum. Antherae staminum trium longiorum oblongae, coeruleae; staminum minorum breviores sed latiores, ovales, basi apiceque emarginatae pulchre flavae. (Kcke.)

4. TRADESCANTIA PANICULATA Roxb. — Griffith notulae (1851) p. 234. — Cfr. l. c. plantae descr. — Hab. in humidis silvosis inundatis, Mergui; Moulmein copiosa. — Omnib. fere notis accedit, sed ovar. 2-loculare 2-ovulatum et breviter stipitatum.

5. TRADESCANTIA LYONII hort. — v. Schlechtendal in Linnaea 1852. p. 187.

6. TRADESCANTIA GONATANDRA Schltd. — v. Schlchtd. in Linn. XXIV. p. 659, melius fortasse: Gonatandra tradescantioides Schltd. — Cfr. l. c. pl. descr. et observ. — Confer infra Campeliam fastigiatam Schlchtdl.!

6. TRADESCANTIA MARTENSIANA (Kth. enum. IV. 697.) — Hook. bot. mag. t. 4849.

8. TRADESCANTIAE sp. — Griffith l. c. p. 235.

VIII½. STREPTOLIRION *Edgew.*

(Walp. Ann. I. 885.)

Icon addenda.

STREPTOLIRION VOLUBILE Edgew. Linn. Tr. — Wight Ic. tab. 2081.

IX. TINANTIA *Scheidw.*

(Knth. en. IV. 100.)

1. TINANTIA UNDATA Schlechtd. (Tradescantia undata Willd. = Tinantia fugax Scheidw. Knth. enum. IV. p. 98. et p. 101.) — v. Schlechtend. in Linn. XXV. p. 185. — Sepala anguste elliptica, obtusa, concava, pilis albis glandula terminatis hirsuta. Petala (Kunthii sepala interiora) dilatato-rotundata breviter cuneato-unguiculata, calyce vix longiora, intense rosea. Stamina 6, 3 superiora anther. luteis, filamentis a medio barbatis, barba e pilis moniliformib. in latere superiore tantum praesente, pilis filamenti medii totis aureis, lateralib. b. roseis superne aureis; antherae rotundatae connectivo medio dilatato in utroq. marg. pollinifero. Stamina 3 inferiora longiora surs. curvata, intermed. brevius nudum, lateralia longiora inferne in latere superiore pilis longis nodoso-articulatis roseis breve per spatium obsessa; antherae his tribus paulo longiores ellipticae e glauco viridescentes, locul. parallelis marginalib. connectivo angusto sejunctis, polline luteo et viridescente. Ovar. declinatum oblongum e lutescenti viridescens, terminatum stylo cylindraceo, eodem modo ac stamina infera curvato, intense roseo, ap. attenuato; stigma terminale parvum, capitatum. Caps. in pedicello erecto sese aperiens trivalvis. — Habitu Tinantiam erectam omnino aequat, etc.

2. TINANTIA ERECTA Schlchtd. — v. Schlechtend. l. c. = Trad. erecta Jacq. (Knth. enum. IV. p. 98.)

3. TINANTIA LATIFOLIA Schlchtd. — v. Schlchtd. l. c. = Tradescantia latif. Rz. et P. (Knth. l. c. p. 99.)

XI. CYANOTIS *Don.*

(Knth. en IV. 102. — Walp. Ann. III. 660.)

1. CYANOTIS HISPIDA. — Dalz. in Hook. j. Kew gard. misc. III. 139.

4—5 unc., annua tota hispida b. versus parce ramosa, caulib. erect. teretib. striat. rubris, f. lin.-ensiformib. carnos. subplan., 1—2 p. lg., 3—6 l. l., fl. terminalib. in bract. falcato-½ cordatis sessilib. capitato-congestis paucis (4—5).

Calyc. lacin. exter. lin.-lanc.; dorso marginibusq. ciliatae, 3-nerv., ima b. connatae interiores exteriorib. paulo longiores, 3 lin., in tub. petaloid. obconic. ap. 3-lobat. connatae; lobi rotundati, laete punicei, tubo albo breviores. St. 6 fertil., lg. exserta, corollam duplo superantia, styl. aeq.: anth. intense violac.; filam. superne pilis coeruleis secundis barbata, sub ap. incrassata. Caps. inclusa, oblga, obtusa, ap. vers. pilosa, locul. dispermis. — Crescit in rupib. prov. Malwan; fl. Aug. et Sept.

2. CYANOTIS VIVIPARA Dalz. — Dalzell in Hook. j. Kew gard. misc. III. 226.

Epiphyta acaulis tota pilis rufis patulis conspersa, f. radicalib. lin.-ensiformib. plan. crass. carnosis fasciculat., scapis ex radice orientib., filiformib. radicantib. viviparis, peduncul. e scapi nodis solitariis alternis, umbellam bi-trifloram bractea duplici suffultam gerentib., bracteis ad bas. pedunculi foliac. parvis. oblg. acutis vaginantib., capsulae valvis post dehiscentiam valde recurvis, loculis 2-spermis, seminib. cylindricis.

Cresc. in arborib. in jugo Sybadrensi. Fl. Aug. Septbr.

3. CYANOTIS ADSCENDENS Dalz. — Dalzell Contrib. to the bot. of Western Ind. Kew journ. bot. IV. 343.

Caulib. e radice tuberoso plurib. adscendentib. simplicibus b. ad nodum infimum radicantib. teretib. striatis nitentib. alternatim linea pilosa instructis, f. lineari-ensiformib. acutis glabris carnosis recurvis b. vaginatis, vagina brevi integra glabra v. pilosa, pedunc. axillarib. terminalibusq. elongatis, axillarib. solitariis v. geminis, terminalib. ex folio supremo quinis umbellatis, capitulis involuto-spicatis multifloris (30 fl.)

folio brevi suffultis, bract. floralib. biserialib. imbricatis falcatis obtusis ciliatis.

Tubera cylindrico-oblonga. Caulis $1^1/_2$ ped. F. 2—3 p. lg., 2—$2^1/_2$ l. l. Pedunc. 1½—3 p. lg. Calyc. laciniae lin. acutae, dorso pilosae. Cor. 3 l. longa. Filamenta corolla duplo longiora; anth. flavae. Ovar. 3-lobat., appresse pilosum; sem. in quoq. loculo 2, rugosa, nitida. — Crescit circa Belgaum, in graminosis humidis frequens.

4. CYANOTIS CRISTATA Roem. et Sch. — (*Commelyna cristata* Linn. non Burm.) Wight. Ic. tab. 2082.
5. CYANOTIS PILOSA Roem. et Sch. — Wight Ic. tab. 2083.
6. CYANOTIS LONGIFOLIA R. W. — Wight Ic. tab. 2084.
7. CYANOTIS LANCEOLATA R. W. — Wight Ic. tab. 2085.
8. CYANOTIS ROSEA R. W. — Wight Ic. tab. 2086.
9. CYANOTIS LAWIANA R. W. — Wight Ic. tab. 2086.
10. CYANOTIS FASCICULATA? Roem. et Sch. — Wight Ic. tab. 2086.
11. CYANOTIS DICHOTRICHA Stocks ms. — Wight Ic. tab. 2087. 1.
12. CYANOTIS SARMENTOSA R. W. — W. Ic. tab. 2087. 2.
13. CYANOTIS DECUMBENS R. W. — W. Ic. tab. 2088. 1.
14. CYANOTIS VAGINATA R. W. — W. Ic. tab. 2088. 2.
15. CYANOTIS PAPILIONACEA Roem. et Sch. — W. Ic. tab. 2089. 1.
16. CYANOTIS BURMANNIANA R. W. — (*Commelyna cristata*? Burm. non Linn.) — Wight Ic. tab. 2089. 2.

XI/2. ZEBRINA *Schnizl.*

(Walp. Ann. III. 661 in annot.)

1. ZEBRINA PENDULA Schnizl. (Walp. Ann. III. 661. n. 5. in adnot.) — Schnizl. observat. hort. Erlang. 1851. — Speciem hanc ex qua genus Zebrinae condideram (Bot. Z. 1849 p. 869) celebrr. Nees ab Esenbeck in catalogo h. Vratislav. Cyanotidis generi adnumeravit. Pl. autem e seminib. Cyanotidis cristatae acceptis indeque enata, atque jam Linnaeo cognita docuit me, genus Zebrinae bene conditum esse et plane inter se differre haec 2 genera. Cyanotis illa differt calyce fere eleutherophyllo, staminib. mere hypogynis longeq. prominentib., connectivo angusto, item ut antherar. loculi sese fere tangant, deniq. forma stigmatis quod amphoram valde contractam aequat et margine prominulo instructum est. Zebrina autem habet calycem tubulosum, stamina corolliflora, connectivum illud maxime dilatatum et stigma capitato-trilobum. — Decaisne Rev. hort. Par. 1855. p. 141. tab. 8.

XII. CAMPELIA *L. C. Rich.*

(Knth. en. IV. 107.)

1. CAMPELIA FASTIGIATA Schlchtd. (*Tradescantia Gonatandra* v. *Gonatandra tradescantioides* Schldl.) Linn. XXIV. p. 659. Quam in corollario praeteriti anni novam Tradescantiae speciem imo novum genus habuimus plantam nunc, speciminib. laetius evolutis, copiosius florentib., melius observatis sine omni dubio in Campeliae genere collocamus, sed a. aliq. temeritate pro nova specie declaramus. Multis enim notis C. glabratae Knthii, a me non visae, nimis parce obiterq. descriptae respondet, — Confr. pl. descr. l. c.

XIII. DICHORISANDRA *Mik.*

(Knth. en. IV. 109. — Walp. Ann. III. 661.)

1. DICHORISANDRA THYRSIFLORA Mik. (Knth. en. IV. 113). — Mart. fl. Brasil. l. c. tab. 32. f. 1. (analysis).
2. DICHORISANDRA TEJUCENSIS Mart. — Mart. Fl. Bras. p. 238. tab. 32. f. 2.

Dichorisandra Tejucensis } Knth. en. IV. p. 113 et 112.
Dichorisandra Leandri }

Caule ramoso pubescente f. e b. oblique rotundata ovato-oblongis acuminatis subt. vaginisque sericeo-pilosis; racemo terminali villoso pubescente ramulis patentissimis 4—5 floris; sep. molliter pilosis; petalis obovatis obtusis.

Caules 2—3 pedales caet. — In locis provinc. Sebastianopolitanae Bras. fl. Febr. Mart. ♃.

3. DICHORISANDRA PICTA Hook. (bot. mag. t. 4760). — Martius l. c. p. 240.

F. lato-ellipticis mucronato-acuminatis subternatim approximatis fusco-maculatis, panicula terminali plurifl., fl. hexandris dioicis (an semper?) petalis ovalib. obtusis.

Dichoris. picta hortulanor. et Hook., Schlchtd. in Linn. XXV. p. 456.

Patria: Brasilia? — Planta paululum ultra pedalis, subramosa etc.

4. DICHORISANDRA INCURVA Mart. (Kunth en. IV. III.)

var. *glabrescens*: Mart. fl. Brasil. p. 242.

Caulib. elongatis, ramosissimis subscandentib. vaginisque glabriusculis.

Cresc. in silvis alternis prov. Sebastianopolitanae var. β. pr. Cujaba: M. ♃.

5. DICHORISANDRA OXYPETALA Hook. — Martius l. c. p. 242.

Dichorisandra oxypetala Hook. }
Dichorisandra latifolia Knth. } Knth. en. IV. 113 et 112.

F. ellipticis utrinque acuminatis glabriusculis, vaginis ore ciliatis; racemo terminali villoso pubescente; ramulis abbreviatis paucifloris; sep. oblongis glabris; petalis acutis.

Cresc. in Brasiliae prov. Sebastianopolitana. ♃. — Caulis humilis simplex, caet.

6. DICHORISANDRA PENDULIFLORA (Knth. en. IV. 114.) — Martius l. c. p. 244. t. 33.

7. DICHORISANDRA LEUCOPHTHALMOS. — Hook. bot. mag. 1858. tab. 4733.

F. ellipticis acuminatis utrinque glabriusculis, scapis radicalib. v. subradicalib. aphyllis vaginatis paniculatim racemosis glaberr., bract. e lata b. acuminatis sep. exteriora vix superantib., fl. hexandris.

Patria: Brasilia. — Spec. valde affin. D. radicali Nees et Mart.

8. DICHORISANDRA MARGINATA Schldl. (D. ovalifolia h. Jen. nec Presl.) — v. Schlchtd. in Linn. XXVI. p. 454. — Caulis florifer quotannis ex rhizomate oritur 3-ped. etc. — Patria l. c. non appellata.

Annotatio: Gynandrarum subclassis secundum in Annalibus adhuc observatum ordinem rite locum obtinere delieat quartum, inter subclassem Rhizanthearum et Scitaminearum. Quod tamen subclassis haec a celeberrimo Reichenbachio curata serius quam desideraverim ad lucem publicam prodeundam adferit, illa hoc in loco effermat subclassem octavam, et inter monocotylearum ordines locum obtinet duo detricesimum. — Subclasses Coronarias (p. 99) et Enanti oblastas (p. 157) errore numeris VII. et VIII. ut in priore cyclo hic designatas, numeris VI. et VII. lectores benevole significent ab iis observanter quaerò, ut ordinum series rite inhibeatur.

Subclassis VIII. GYNANDRAE Endl.

(Endl. Gener. pl. p. 184. — Meisn. Gen. pl. vascul. I. 367. II. 275.

Ordo XXVIII. ORCHIDES *Juss.* *)

(Gen. 64. (1789).

Lindley, Folia *Orchidacea*. Vol. I. Londini 1852—1855. H. G. Reichenbach fil. *Xenia Orchidacea* Lipsiae ab anno 1854.

Subordo I. *MALAXIDEAE* Lindl.

1316. PLEUROTHALLIS *R. Br.*

(Walp. Ann. III. 516.)

Sect. *ELONGATAE* Lindl.

— Typus *Pleurothallidis bogotensis* Lindl. —

1. PLEUROTHALLIS GLOSSOPOGON Rchb. fil. in Bonpl. III. 71: aff. Pl. bogotensi Lindl. labello basi humerato tripartito, partitionibus lateralibus linearilanceis introrsum hamatis, partitione media plus duplo longiori ligulata basi bicarinata, lineis tribus parallelis papularum per discum, apice barbulato; gynostemio apiculato. Tenuior Pleurothallide bogotensi. Caulis secundarius spithamaeus tenuis. Folium oblongum utrinque attenuatum Pleurothallidis racemiflorae. Spatha inflorescentiae parva membranacea. Racemus folio longior; pauciflorus. Flores illis P. bogotensis paulo majores; vulgo resupinati. Sepalum utrumque a basi ovato lanceolata attenuatum, inferius apice latius, superius ibi subulatum. Tepala Pl. bogotensis, sed longius subulata. Granat. nov. 7000'. Wagener.

2. PLEUROTHALLIS BISERRULA Rchb. fil. in Bonpl. III. 71: aff. Pl. bogotensi labello obtusiori utrinque argute retrorsum serrato dentato. Planta angustior. Folium oblongum valde coriaceo-carnosum basi cuneatum apice obtusatum tridentatum 4—5 pollices longum, duos latum. Spatha pergamenea nitida. Pedunculi folium quarta excedentes gemini. Sepala multo validiora, minora, quam in Pl. bogotensi, inferius apice bicuspe. Tepala uti in illa, basi undulata, crenulata. Labellum basi cordatum, ligulatum, per discum tricarinatum — supra descriptum. Ocanna Wagener.

3. PLEUROTHALLIS SIRENE Rchb. fil. in Bonpl. III. 71: a typo Pl. bogotensis: trisepala, labello tripartito, basi humerato, partitionibus lateralibus lineari-ligulatis abbreviatis, partitione media rhombeo-ligulata acuta basi utrinque carinata antice serrulata. — Minor Pleurothallide bogotensi. Folium oblongum attenuatum subacutum valde coriaceum. Spatha coriacea. Inflorescentia solitaria, seu plures, folio tantum tripollicari duplo triplove longiores. Sepala Pl. bogotensis, sed tria. Gynostemium apiculatum. Perigonium aquose brunneum purpureo-striatum uti in Pleurothallide Lindeni. — n. Granat. 6—7000'. Martio. Wagener.

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*) Compilavi, quae annis 1851—55 edita additis quibusdam in tomo tertio omissis. In eo autem in anachronismum incidi, ut quae emendata post annum 1855, ea jam nunc correxerim. — H. G. Rchb. fil.

4. **PLEUROTHALLIS PHALANGIFERA.** Acronia phalangifera Presl. Pl. Mathewsii Lind. Pl. bogotensis Lindl. Rchb. fil. in Bonpl. III. 239. Planta elata incluso pedunculo pedalis. Caulis secundarius sub folio longe evaginatus. Folium oblongo obovatum acuminatum basi rotundato cuneatum, spithamam longum, ultra tres pollices latum. Pedunculus racemosus nunc geminus; infra nunc laxiflorus, nunc totus laxiflorus. Bracteae oblique ochreatae vaginatae apice acutiusculae. Flores infimi longe pedicellati, supremi breviter. Sepalum utrumque triangulo acuminatum, tepala a basi lanceolata setacea, subaequalia. Labellum triangulo acuminatum, utrinque ante basin rotundatam angulatum, disco basilari gibberoso carnosum, tepalis plus duplo brevius. Gynostemium gracile clavatum labello brevius. (Neu-Granada Linden 1271!) Woods near Pasto. Sept. 1848. 436. Jamieson

5. **PLEUROTHALLIS PEDUNCULATA** Rchb. fil. Linnaea XXII. 822. Paxt. fl. G. III. 138. c. xyl. 298.

— Typus *Pleurothallidis acuminatae* Lindl. —

6. **PLEUROTHALLIS ACUMINATA** Lindl. (Dendrobium acuminatum Hb.! B. Kth. I. I. 357.) Rchb. fil. Bonpl. II. 24. — Caule secundario abbreviato angulato, folio oblongo apice basique attenuato valde coriaceo, racemo spithamaeo sextuplo breviore, spatha vaginisque basilaribus abbreviatis, racemo totum pedunculum occupante, bracteis vaginaeformibus ore dilatatis retusis supra nervum medium acutis, ovariis pedicellatis bracteis duplo longioribus, mento obliquo, sepalis linearilanceis acuminatis subaequalibus, tepalis anguste oblongis acutis, quadruplo brevioribus, labello oblongo utrinque attenuato, ante basin utrinque undulato constricto, apice retusiusculo emarginato, nervis 3 carinato elevatis, gynostemio gracili alato, apice cucullato, denticulato. Flores sicci flavo-rubri.

7. **PLEUROTHALLIS ASPERILINGUIS** Rchb. fil. et Warscew. Bonpl. II. 114: aff. Pl. aureae tepalis trinerviis, labello cuneato oblongo quinquenervi ante apicem papulis acutis aspero, medio utrinque obliquo marginaliter carinato, anthera apiculata. Spithamaea. Caulis in sicca planta obscurus, infra a vaginis 3—5 vestitus, supra summam elongatam acutam nudus. Folium oblongum apiculatum basi cuneatum racemo subdimidio brevius, bene coriaceum, bipollicare, medio prope dimidiatum pollicem latum. Spatha membranacea acuta trilinearis in basi racemi basin usque floridi, —10 flori; 3—4 pollicaris. Bracteae ochreatae apice retuso apiculatae. Mentum rectangulum. Sepalum summum triangulum apice lineare, inferiora subaequalia, basin usque divisa. Tepala a cuneata basi ovata acuta trinervia. Labellum a basi angustiori oblongum acutiusculum, 5 nerve, ante apicem papulis acutis asperum, carinula obliqua brevi extrorsa utrinque ante medium marginem; gynostemio alato, androclinio cucullato denticulato; anthera apiculata. Flores flavi, illis P. aureae Lindl. semiaequales. Peru. Warscewicz.

8. **PLEUROTHALLIS DINOTHERII** Rchb. fil. et Warscew. Bonpl. II. 114: aff. Pl. intricatae, perigonio externo bilabiato, sepalis 2 inferioribus linearifalcatis deflexis, sepalis ovatofalcatis, labello ligulato, gynostemio utrinque rotundato alato. Caulis gracilis vaginis Lepanthinis hyalinis arctis ostio ampliori ciliolato ita sibi superpositis, ut recentissimus sit axillaris in folio anni praecedentis, ita 4 vulgo superpositi; foliigeri. Folium lanceolatum acutum basi bene cuneatum, bipollicare, medio ½ pollices latum, trinerve; basi sua cum pedunculo ac gemma pro anno insequenti inclusum in vagina ampla quinquenervi acuta. Pedunculus elongatus, sparsiflorus (secundiflorus), 6—7 pollicaris, per pollicem infimum nudus, bracteae arcte vaginatae acutae minutae; perigonium ima basi coalitum tripartitum, bilabiatum, sepala linearia, summum ascendens, inferiora falcato deflexo; tepala cuneato ovata, acuta, incurva, margine microscopice denticulata; labellum brevissime unguiculatum, ligulatum acutum, utrinque obscure sinuatum, margine minutissime velutino ciliatum; gynostemium gracile retusum, ala semiovata minute denticulata utrinque pone foveam. Peru. Warscewicz.

9. **PLEUROTHALLIS LISTROSTACHYS** Rchb. fil. in Bonpl. III. 71: aff. Pl. stenopetalae Lindl., sepalis linearibus elongatis (nec lineari-lanceis) ciliatis, inflorescentia hinc

scopiformi. Caulis secundarius ultra spithamaeus paucivaginatus. Folium ovatum seu oblongum basi petiolato-attenuatum apice contractum, valde carnosum, superne vernixium. Spatha minuta pro inflorescentia nunc solitaria, nunc gregaria. Racemi densiflori secundiflori. Flores horizontales sicci cinabarini seu flavidi. Sepala linearia margine ciliatula. Tepala cuneato-ovata apice unipapulosa, multo breviora. Labellum trilobum: lobi laterales semiovati, lobus medius ligulatus productus, carinae ternae in labelli basi; discus lobi medii nunc papulosus. Gynostemium clavatum apiculatum. — N. Granat. 1000'. Ocanna. Wagener. Martio.

10. PLEUROTHALLIS LANCEANA Lodd. Bot. Cab. 1767. Huc: Pl. crassifolia Focke in Tidsch. voor de Wis. Nat. Wetsch. II. Afl. 1849. p. 196. Caule brevi monophyllo. Folio elliptico acuto subcarnoso, racemo multifloro cernuo folio longiore, sep. in tubum angulosum attenuatum connatis, lat. apice tantum liberis, supremo ultra dimidium cum lateralibus connato, petalis plus dimidio minoribus oblongo-lanceolatis aristato acuminatis ciliatis, labello dilatato linguiformi unguiculato, basi bicalloso. Caulis teres, erectus, subincurvus, 1—4 cent. longus. Fol. ellipticum, vel oblongum, utrinque acutum, apiculatum, crassum, strictum, subcarnosum, planum, basi plicacatum, caule interdum quadruplo longius, 3—8 cent. longus, 15—30 millim. latum. Racemus multiflorus, teres, cernuus, validiusculus, articulatus, e sinu baseos folii ortus, ibique bractea complicata, acuta, membranacea, fusca vestitus. Vaginae minutae ad quemque articulum adpressae, deltoideae, aristate mucronatae, virides. Pedicelli brevissimi. Flores subsecundi, adpressi, sub lente velutini, ochracei, centimetri longitudine, 2 mm. ad basin crassi. Perianth. clausum. Sepala in tubos triangulares apice attenuatos connatos, ochracea, basi intus purpurea; lateralia inter se non nisi apice libera, supremum ultra dimidium cum lateralibus connatum. Petala plusquam dimidio minora, oblongo-lanceolata erecta, aristato-acuminata, margine ciliata, uninervia, diaphana. Lab. petalis brevius, dilatato linguaeforme, concavum, unguiculatum, cum columnae basi producta articulatum, subcarnosum, intus basi bicallosum. Columna erecta, crenata, labello subaequalia, marginata, basi purpurea, clinandrio tridentato. Anthera unilocularis, clinandrio immersa. Poll. 2. orbiculata, **in clinandrio subinde attenuata** (!!!), plano convexa, incumbentia. Ovarium sulcatum, obsolete trigonum. — Hab. In Surinami sylvis ad plantationem Berlijn, ad rivum Pansa, supra arborem. Fl. Oct. et Majo.

Obs. Non solum iconem Fockeanam habeo 250 et 1846. delineatam, quam habuit cl. Lindley, sed quae addidit 24. Majo 1848 et typum Fockei et Wullschlaegelii. Icon primaria est plantae macrae stenophyllae.

— Typus *Pleurothallidis loranthophyllae* Rchb. fil. —

11. PLEUROTHALLIS LORANTHOPHYLLA Rchb. fil. in B. Z. 1852. p. 674: disepala labello indiviso, caulibus secundariis tereliusculis, validis, folio oblongo basi petioli instar cuneato, apice acuto, imo apice tridentatulo, dente medio minori, spatha coriacea magna, ancipiti; pedunculo valido folium nunc longe excedente, racemoso; bracteis ochreatis, retusis, hyalinis; floribus bilabiatis, phyllo supremo lanceolato, acuminato seu acuto, phyllis lateralibus externis connatis in unum naviculare, acutum, phyllis lateralibus internis a cuneata basi oblongis, acuminatis, externa subaequantibus; labello rhombeo antice ligulato; gynostemii androclinio nudo.

Rhynchopera punctata Karsten Ausw. Gew. Venez. VIII Walp. Ann. III. 521. Flores illis Pl. pubescentis Lindl. aequales alboviridés maculis rufo violaceis. Columna et labellum aequicolores. Pollinia viscinoso appendice antice quadrato. Pedicelli alte supra axillam bractearum inserti. Pars inferior est racemosa, superior spicata. — Rchb. fil. Bonpl. II. 24. — Eodem loco: Caracas. Wagener.

„*Pleurothallis subpellucida* Klotzsch est valde affinis et transire videtur in hanc." — Nunc omnino persuasum habeo, esse exacte eandem. En descriptio: Pl. (Elongatae) subpellucida Kl. Caespitosa; caule secundario tereliusculo, infra medium vagina membranacea obtusa arida instructo; folio crasso, coriaceo, oblongo, longitudinaliter canaliculato, apice breviter tridentato, basi attenuato, articulato, caule duplo

longiore; vagina spathacea, membranacea, subtubulosa, compressa, ab uno latere in acumen brevissimum attenuata; pedunculis solitariis, binis aut rarissime ternis, 12—15 floris, filiformibus, folio subduplo longioribus; bracteis pellucidis, ochreatis, breve acutis; pedicellis elongatis, extraaxillaribus; ovariis brevibus, teretiusculis, longitudinaliter 6-sulcatis, perianthii foliolis exterioribus pellucido-stramineis, elongato-lanceolatis, acutis, superiore trinervio, inferiore latiore sexnervio, interioribus angustis brevioribus; labello lanceolato, acuto; gynostemio brevi, subovato. — Orchidea e tribu Malaxidearum. — Caulis secundarius 4—5 pollices longus, lineam in diametro. Folia 4 poll. longa, 1½ poll. lata. Spatha bipollicaris. Racemi 6—8 poll. longi. Pedicelli 3—4 lin. longi. Germen lineam longum. Perigonii foliola exteriora 4 lin. longa, supremum lineam latum, 2 inferiora in unum usque ad apicem connata, 2 lin. lata, interiora 3 lin. longa, vix lineam lata. — E Venezuela misit Wagner.

— Typus: *Pleurothallis Keffersteiniana* Rchb. fil. —

12. PLEUROTHALLIS KEFERSTEINIANA Rchb. fil. B. Z. 1852. 673: caulibus secundariis teretiusculis tenuibus abbreviatis, folio oblongo, apice attenuato, acutiusculo, imo apice microscopice tridentato, basi longe cuneato, pedunculo tenuissimo, superne flexuoso, racemoso, plurifloro (—9), (certe ex spatha decidua orto), trivaginato, vaginis scariosis, arctis, apice libero acutis, folium nunc duplo superante, bracteis ochreatis, acuminatis, floribus hiantibus, perigonii phyllo supremo lanceolato acuto, lateralibus externis connatis, a cuneata basi ovatis, utroque interne papillis filiformibus barbato, phyllis lateralibus internis a cuneata basi dilatatis, apice obtuso triangulis, duplo brevioribus; labello unguiculato, cordato, lateribus rectis antrorsum cuneatis subito utrinque profunde emarginatis, in unguem apicis ovalis (si mavis: trilobo unguiculato, lobis lateralibus dolabriformibus, medio unguiculato ovali minuto papuloso) papulosi; androclinio membranaceo, ciliolato. — Sepala tepalis duplo latiora. Papillae niveae filiformes spectabiles. Labellum introrsum complicatum. Sepala et labellum ochracea, illa maculis fuscis, hoc violaceis. Columna rosea. — Venezuela, Wagener. — Rchb. fil. Bonpl. II. 24: Caracas. 4000—5000'. October. Rarissima.

— Typus *Pleurothallidis pulchellae* Lindl. —

13. PLEUROTHALLIS (Elongatae Racemosae Disepalae) SEGOVIENSIS Rchb. fil. in Bonpl. III. 223. — Aff. P. Ghiesbreghtianae A. Rich. Gal. caulibus secundariis abbreviatis, folio anguste cuneato oblongo obtuse acuto, pedunculo gracili multifloro, sepalo inferiori lanceolato bidentato, tepalis falcatis acutis abbreviatis, labelli ungue margine papilloso, laminae cordato rotundatae partitionibus lateralibus lanceis acutis antrorsis partitioni mediae oblongae obtuse acutae duplo brevioribus, gynostemii clavati gracilis androclinio denticulato. Planta gracilis semipedalis. Caules secundarii omisso pedunculo vix pollicares. Folia tripollicaria. Pedunculus tenerrimus tertio inferiori paucivaginatus, sursum secundiracemosus. Bracteae ochreatae apiculatae. Flores bilabiati sicci violacei. Sepalum summum lanceum. Labelli lamellae marginales a lobi medii basi discum versus convergentes. — Magnitudo florum Pleurothallidis saurocephalae Lindl. In Segovia. Oersted.

14. PLEUROTHALLIS MAGDALENAE Rchb. fil. in Bonpl. III. 72. — Similis Pl. incomptae Rchb. fil. trisepala, labello ligulato obtuso utrinque ante basin angulato, tepalis ligulatis basi inferiori acutangulis, gynostemio clavato. — Plantula gracilis macra quinque-sexpollicaris. Caulis secundarius vaginis vestitus. Folium spatulato-oblongum acutiusculum vix bipollicare dimidium pollicem vix latum. Pedunculi tenues pluriflori secundiflori. Bracteae pellucidae ochreatae. Sepala triangulo-ligulata. Quasi imminuta Pl. pulchella Lindl. — Ocanna: Magdalena. Wagener.

15. PLEUROTHALLIS INCOMPTA Rchb. fil. Bonpl. II. 24. — Caule secundario abbreviato, folio cuneata basi oblongo obtuso apice obtusato, medio minute trimucronulato, spatha membranacea abbreviata, pedunculo gracili laevi dimidio inferiori

1—2 vaginulato, vaginis brevibus arctis acutis, racemo plurifloro, sublaxifloro, bracteis vaginaeformibus oblique retusis supra nervum acutis, floribus illos Pl. pictae sequantibus, sepalo summo oblongo lanceolato acuto, galeato, inferiori elliptico apice bidentato ceterum omnino connato, tepalis ovato lanceis paulo brevioribus, labello sepalis aequilongo oblongo obtuso, supra medium pandurato constricto, gynostemio gracili, androclinii limbo cucullato denticulato. Pone Pl. panduriferam Lindl., quae tepala habet obtusa et lobum labii medium angustum. Caracas. Wagener.

15. PLEUROTHALLIS NICARAGUENSIS Rchb. fil. in litt. ad cl. Wendl. fil. — Aff. Pl. incomptae: sepalo superiori ovali obtuse acuto, inferiori subaequali latiori apice non emarginato, tepalis rhombeis obtusis, labello ovali medio utroque latere emarginato, hinc trilobo, lobis lateralibus obtusatis, lobo medio ovali obtuso acuto, callis geminis in parte postica, androclinio tridentato. — Cum Physosiphone foliis oblongo-ligulatis atque florum colore flavido pulcberrime congruit. Hinc:

„*Physosiphon Nicaraguensis* Liebm. — Liebm. Mss. ind. sem. h. Acad. Hauniensis 1853. (Ann. sc. nat. IV. t. 1. p. 329). — Differt a Ph. Loddigesii Lindl., f. sp. leviter emarginatis, spica longitudine folii, scapo minus bracteato, perigonii exterioris foliolis magis acutis pallide virescentibus, perig. interni foliolis 2 acutis columnam duplo superantibus, labelli lobis lateralib. minus evolutis, lobo medio acuto, columna brevissima, capsula perigonio triplo quadruplove longiore clavata 6 costata, 6-sulcata, costis rotundatis.

E Nicaragua reportavit Oersted."

16. PLEUROTHALLIS PULCHELLA Lindl. Rchb. fil. in Bonpl. III. 71. — N. Granat. 2. Februar — 3. März. 6000′ Wagener.

— Typus *Pleurothallidis pictae* Lindl. —

17. PLEUROTHALLIS ZEPHYRINA Rchb. fil. in Bonpl. III. 71. — Aff. Pleurothallidi aristatae Hook. (si mavis intricatae Lindl.) tenuissima (inde si placebit Muscosa) sepalis tepalisque aequalibus a basi lancea aristatis. — Caespes adest tenuis. Caules tenues brevissimi. Folia a basi aequilonga filiformi lanceolata acuta, nunc curvata, prope pollicaria, lamina superiori duas tresve lineas lata. Pedunculus capillaris tri- ad quadripollicaris. Bracteae adeo minutae ut vix nisi lente conspiciantur. Ovaria in pedicellis tenuissimis longissimis (6 lineas longis). Labellum ligulatum utrinque ante basin acutangulum sepalis tepalisque multo brevius. Gynostemium gracile clavatum apice cucullatum. Perigonium flavidum. — N. Granat. Ocannae. Wagener.

18. PLEUROTHALLIS MARGINALIS Rchb. fil. in Bonpl. III. 224 et Otto Hamb. Ztg. — Aff. P. parvifoliae Lindl. folio crassissimo apice acuto (tridentatulo), tepalis rhombeis acutis. Folium oblongum superficie superiori circa marginem sulco marginatum; viride atroviolaceo irroratum; superficie inferiori disco quidem planum, marginem versus proclivi attenuatum; viride atroviolaceo punctatum, crassum; subsemipollicare, tres lineas latum. Pedunculus vere capillaris tripollicaris; apice racemosus. Bracteae membranaceae abbreviatae. Perigonium luteum, tepalis purpureis, bilabiatum. Sepalum superius triangulo ligulatum acutum, inferius ligulatum deflexum apice bidentatum. Tepala multo breviora. Labellum ligulatum obtuse acutum ante basin unguiculatum obtuse humeratum, carnosum, tepalis paulo longius. Gynostemium elatum apice tridentatum. Species tenuis folio crasso infra purpureo, pedunculo perlongo. Rio.

19. PLEUROTHALLIS FLORULENTA Lind. Rchb. fil. Bonpl. III. 223.: aff. Pl. pictae Lindl. (nec Hook.): folio cuneatoligulato apice retuso, sepalo inferiori apice bidentato, tepalis cuneato ovatis obtusis, labello a basi brevissime unguiculata oblongo medio dilatato, gynostemio gracili alato apice tridentato. Folium duos et dimidium pollicem longum, tres lineas latum. Pedunculus capillaris quadripollicaris, ultra medium seautbus, minute uni — bivaginatus. Racemus laxus pluriflorus. Bracteae minutissimae. Pedicelli ovariis duplo terve longiores. Sepalum supremum lanceum acumi-

natum, inferius simile deflexum. Flores flavi nervis sepalorum atropurpureis. E Nova Granada a cl. Linden introducta.

20. **PLEUROTHALLIS PICTA** Lindl. B. Reg. 1797.: huc Pl. surinamensis Focke in Tidsch. voor de Wis- en Natr. Wetenschappen II. 3. Afl. 1849. p. 194 et Nat. Verhdl. van de Holl. Maatsch. Haarl. Stirp. Surin. 1851. 214 cum ic. Tab. LXIV. — F. elongato-spathulatis obtusis emarginatis, racemis filiformibus subsecundis multifloris folio longioribus, sepalis lanceolatis, lateralibus alte connatis, petalis spathulatis acutis columnam aequantibus; labello linguaeformi obtuso plano, clinandrio dentato. — Herba epiphyta nana, caespitosa. — Caulis brevis, monophyllus. Folia elongatum apice obtuse emarginatum —, in caulem processu petioliformi attenuatum, erectum, apice leviter recurvum, 4—5 cent. oblongum. — Racemus axillaris, sc. ad basin folii ortus, filiformis, flexuosus, subsecundus, 6—15 florus, erectus, foliis multo longior. — *Sep.* lateralia alte connata, apice tertia libera, basi saccata, supra cymbiformia. *Pet.* minora, columnam aequantia, spatulata, acuta, diaphana, uninervia. Labellum linguaeforme, obtusum, planum, cum pede columnae articulatum, columnae parallelum, paulisper recurvum, fusco-ochraceum. Columna marginata, subarcuata, alba, margine membranacea, utrinque apicem versus in dentem desinens. Anthera terminalis, opercularis, subconica, albida, unilocularis. Pollinia dua rotunda, plano-compressa. Ovarium sulcatum, cum pedunculo articulatum. Capsula obovato-oblonga, triquetra subincurva, 7 millim. longa, 3 millim. crassa viridis. — Flores luteo ochracei. — Hab. passim in sylvis Surinam, supra arbores. Flor. Apr. Maj. Oct.

Obs. Valde accedit ad P. racemifloram et emarginatam Lindl., sed differt ab hac labello indiviso linguaeformi, ab illa petalis nanis spathulatis acutis; ab utraque foliis elongato-spathulatis. — Cf. Sw. Fl. Ind. Occ. p. 1554 1. sub Dendrobio racemifloro.

— Typus *Pleurothallidis tricarinatae* Pöpp. Endl. —

21. **PLEUROTHALLIS BOLIVIANA** Rchb. fil. Bonpl. III. 224.: aff. Pleurothallidi tricarinatae Pöpp. Endl. sepalo inferiori bicuspide, tepalis lanceolatis acuto-acuminatis, labello a basi unguiculata ligulato utrinque ante basin obtusangulo, gynostemio gracili dorso ligula producta cucullata. Pluries minor Pleurothallide tricarinata. Caulis primarius crassus polyrrhizus. Caules secundarii triangulares pollicares. Folium oblongo-ligulatum sesquipollicare, tertiam pollicis latum. Pedunculi gemini folio subduplo longiores; basi spatha minuta fulti univaginati. Spica disticha. Bracteae abbreviato triangulae carinatae. Ovaria pedicellata minute triptera bracteis paulo longiora. Sepalum utrumque triangulum, superius uni-, inferius bicarinatum. Tepala plus duplo sepalis breviora. Bolivia. Bridges.

— Typus *Pleurothallidis saurocephalae* Lodd. —

22. **PLEUROTHALLIS MINAX** Rchb. fil. Bonpl. II. 24: caule secundario abbreviato, folio oblongo apice acuto, illo duplo longiore, spatha parva basilari, pedunculo firmo dimidii inferioris medio acute univaginato, spica densiuscula, bracteis vaginatis retusiusculis acutis, floribus bilabiatis elongatis, sepalo summo linearilanceolato apice subdilatato acuto, inferiori oblongo apice acute bidentato, tepalis quater brevioribus lanceolatis acutis fimbriatis, labello aequilongo a basi cuneata oblongo antice subito attenuato ligulato obtuso lamella elevatula semilunato utrinque inter lineam mediam et marginem, toto disco striolis carnosulis elevatulis transversis fasciato, gynostemii subaequilongi gracilis androclinio membranaceo marginato ciliolato; toto pedunculo, bracteis, ovario, sepalorum pagina externa sericeo velutinis. Flores vitellini, sepalum inferius rufo punctatum. Labium rubrum. Caracas. Roxb. 5000'. November. Wagener.

Obs. Ab ill. Lindley pro Pl. plumosa Lindl. habita (Fol. IX. Maj. 1859.). Icon Pl. plumosae Lindleyanae a planta mea longe recedit, praesertim labello serrato.

23. **PLEUROTHALLIS XIPHIZUSA.** Huc: *Crocodeilanthe* Rchb. fil. et Warscew. in Bonpl. II. 113. n. gen. Malaxidearum habitu Xiphizusae nulli affine glandula spuria insigne. Racemus multiflorus subsecundus: bracteae membranaceae cucullatae acutae. Flores

transversi. Perigonia externa bilabiata, labia (sepala) oblongolanceolata, inferius concavum, apice bidentatum. Tepala cuneata apice retusa cum apiculo. Labellum ovato rhombeum acutiusculum nervis 3 mediis carinatis, cum gynostemio continuum, nec articulatum. Gynostemium a basi ampliori gracile, semiteres; cupula apicilaris obliquà pro anthera ac stigmate interjecta regione transversa bicallosa (rostello). Anthera depressa, apice tantem aperta. Pollinia 2 depresso pyriformia in glandula spuria triangula sessilia. C. Xiphizusa. Blüthen wenig grösser als die der Xiphizusa chloroptera. Peru. Warscew. — Rchb. fil. Xenia I. Tab. VI. I. 1—7. 19. 10. Ab ill. Lindl. qui meliora tenuià specimina (mediante Skinnero!), dum mihi frustulum subvenit scilicet pedunculus, bene huc relata. Pl. Crocodilanthe Folia VIII. Cum tamen contra leges nostras nomen speciei haud servaverit ill. auctor, haud sine magno gaudio nomen ab illo propositum iterum mutavi.

— Typus: *Pleurothallis erinacea* Rchb. fil. —

24. PLEUROTHALLIS ERINACEA Rchb. fil. in Bonpl. III. 72: nulli affinis?, elongata, spicata, trisepala, bracteis triangulis carinatis magnis, ovario erinaceo muricato, tepalis lanceo-cuneatis basi utrinque unicallosis, labello a lineari basi trilobo, utrinque ante unguem uniaristato. — Mira planta! Caulis secuudarii adest apex validus. Folium obovatum basi cuneatum apice contractum plus tres pollices longum; unum et dimidium latum. Spatha inflorescentiae minuta. Pedunculus alter jam emarcidus, alter apice floridus; ultrapedalis, obtusangulo flexuosus, distiche et remote bracteosus. Bracteae semipollicares; pedicellis paulo longiores, carina virides, margine scarioso albidae. Perigonium flavo-rufum. Sepala triangula, dorsale lateralibus brevius. Tepala duplo breviora. Labelli unguis brevis basi utrinque unicallosus, lamina triloba; lobi laterales postici rotundati, lobus medius ligulatus acutus, omnes margine serrulato-papulosi. Arista brevis linearis apice bifida utrinque in basi laminae. Gynostemium gracile clavatum; androclinii cucullus elevatus; rostellum productum. Anthera et pollinia genetica. Flores inclusis pedicellis ultrapollicares. — Ocanna — novae Granatae. Wagener.

— Typus *Pleurothallidis Tripteranthae.* —

25. PLEUROTHALLIS TRIPTERANTHA Rchb. fil. Bonpl. II. 24: caule secundario brevissimo, folio oblongo basi cuneato, apice attenuato, pedunculo valido, bivaginato, folium excedente, racemoso 7—9 floro, bracteis vaginatis retusis acutis, pedicellis validis cum ovariis calloso articulatis, ovariis cylindraceis gracilibus, sepalis lanceolatis, alis erectis hinc crenatis, hinc integerrimis a costis ovarii per nervos medios sepalorum transcendentibus medium usque, tepalis abbreviatis (1/3 longitudinis sepalorum) lanceolatis obtuse acutis, labello brevissime unguiculato basi utrinque rotundato angulato, rhombeo retuso, trinervi, carinulis crenulatis utrinque inter marginem crenulatum et nervos laterales, tota labelli superficie praesertim anteriori trabeculis transversis minutis scabra, gynostemio subaequilongo gracili apice membranaceo cucullato minute lobulato. Flores brunnei pupureo maculati. Caracas. Wagener. 5000'. Martio. Pedunculus quinquepollicaris. Folium tres pollices longum, medio unum pollicem latum. — Rchb. fil. Xenia I. p. 73. Tab. 28. III. 4—6.

26. PLEUROTHALLIS TRIPTERYGIA Rchb. fil. Bonpl. II. 24: simillima praecedenti a qua differt statura duplo minori, alis multo humilioribus, labello exacte rhombeo acuto integerrimo ceterum aequali, tepalis ligulatis sensim acutis. Caracas. Wagener. Rchb. fil. Xenia I. p. 74. Tab. 28. IV. 7—9.

— Typus *Pleurothallidis longissimae* Lindl. —

27. PLEUROTHALLIS FRITILLARIA Rchb. fil. in Bonpl. III. 240: similis Pl. longissimae Lindl. labello a basi ligulata hastato dilatato, ibi minute denticulato, gynostemio utrinque angulato, androclinio integro. Planta ultrapedalis. Caulis secundarius non praesto est nisi summitas. Folium coriaceum oblongum basi cuneatum apice subacutum (tridentatum). Racemus elongatus basi 1—2 vaginulatus; spatha membranacea

parva cinctus superne racemosus, secundiflorus. Flores ringentes violaceo purpurei basin versus flavido tesselati magni. Ovaria pedunculata bracteas ochreatas retusas bene excedentia. Sepala oblongolanceolata, inferius bicuspe. Tepala rhombea multo breviora. Ravines of the Andes at an elev. of 7000 feet. 678. Jamieson.

28. PLEUROTHALLIS MALACHANTHA Rchb. fil. in Bonpl. III. 223: aff. Pl. longissimae Lindl. caule secundario apice triptero sepalo inferiori semibifido, laciniis acutis, tepalis cuneatis obtuse acutis, labello cuneato-flabellato retuso, androclinio bene cucullato, denticulato. Caulis secundarius quinque—sexpollicaris apicem versus bene tripterus. Folium oblongum utrinque attenuatum, bi—tripollicare, pollicem medio latum. Racemi tenues multiflori quinque—sexpollicares. Flores illis Pl. longissimae paulo minores valde molles (ex sicca) forsan virides, tepalis ac labello pallidioribus. Sepalum utrumque basi connatum: triangulum. Serra dos Organnos. Gardner 660.

29. PLEUROTHALLIS PERPUSILLA Rchb. fil. in Seemann Herald. p. 215: caulibus secundariis brevissimis a squamis hyalinis 2—3 vestitis, folio spathulato basi valde et longe attenuato apice rotundato obtuse minuteque tridentato, pedunculo capillari folium duplo-triplo excedente, minute bivaginato, vaginis ochreatis acutis, racemo 6—8-floro, bracteis ochreatis acutis, pedicellis brevioribus. sepalis oblongis acutis, tepalis lineari-lanceolatis acutis, brevioribus, labello oblongo, excavato, apice acuto solido inflexo, inferne carinato, gynostemio abbreviato utrinque rotundato alato, ab anguli apice ad medium, postice unidentato, in labellum incumbente (!!), anthera mitrata. — Plantula tenuissima, bipollicaris. Flores minutissimi. Near Panama, on trees Semann, n. 1565.

Obs. Nescio, cur ill. Lindley (Folia IX.) amiciss. Seemann pro auctore scribat, cum et in Botany of Herald, et in Xeniis t. I. 173 et tab. 70 nomen meum distincte legere potuisset: forsan nebulae Londinenses impedimento fuerunt.

Cl. Lindley dicit: „— — but the lip in different; by no means, however, slipper shaped as it appeared to Rchb."

Haec scribit, dum tres lineas superius habet: „labello concavo carnoso apice inflexo". Calcei Anglorum nonne sunt convexi?

— Typus: *Pleurothallis laurifolia* H. B. Kth. —

30. PLEUROTHALLIS LAURIFOLIA Hb. Kth.! Bpl. 1, 364: Rchb. fil. Bonpl. II. 23.: subpedalis, caule secundario valido, biarticulato, medio vaginato, folio valde coriaceo, lato oblongo basi angustato, apice angustato (3 denticulato), prope spithamaeo, medio 2—3 pollices lato, (spatha florali acuta carinata ex icone ipsius ill. Humboldt), pedunculo valido infra medium bivaginato, superne racemoso rarifloro, bracteis vaginatis arctis quam ovaria pedicellata triplo brevioribus, floribus galeato bilabiatis, sepalo summo galeato acuto, inferiori subaequali apice bidentato, tepalis cuneato orbiculàribus acutis valide trinerviis, subaequalibus, labello naviculari ligulato antice trilobo, lobis lateralibus obtusangulis erectis, lobo medio carnoso ligulato acuto (ancipiti?), superne verrucoso papuligero, nervis 3 lateralibus in fundo labelli carinigeris, gynostemio gracili utrinque pone stigma angulato, androclinio minuto apicali, anthera depressa, polliniis clavatis. Tepala et labium sepalis paulo breviora. Flos illi Schlimiae jasminodorae prope aequalis.

Obs. Ill. Lindley (Folia VIII.) aliter sentiens plantam descriptam pro adversa specie habet exclamans: „I am quite at a loss to understand upon what ground this remarkable plant has been referred to the Pl. laurifolia of H. B. K., which in expressly declared to be related to P. ruscifolia, a well known species among aggregatae. I have never seen any thing to which Rchb's description at all applies. He says the stem of his plant is stout and about 1′ high; and the leaf 6″ × 2—3″; that it has an acute keeled spatha; and that the flowers are as large as in Schlimia jasminodora that is to say a full inch long by ½ inch across the tube. Had this Pl. laurifolia been described by a less experienced orchidologist than Professor Rchb., it meight have been reasonably doubted, whether the plant is a Pleurothallis at all."

Ad haec Rchb. fil. haec respondet:

1) Planta omnino non a Wagenero lecta, unde descriptio in parenthesi data.

2) Signum exclamationis post Kth.! significat, plantam ex auctoris Kunthii herbario descriptam.

3) Iconem Humboldti visam in descriptione commemoratum.

4) Pleurothalis ruscifolia R. Br. non est „a well known plant". Non mirum, Kunthium false et inepte juxta descriptionem certe comparasse suam cum Pl. ruscifolia sibi non nota, cum ipsissimus ill. Lindley Pl. ruscifoliam diutissime non solum non noverit, sed ipsissimam pro nova specie (Pl. succosa Lindl.) descripserit.

Inde repeto, Pl. laurifoliam meam esse Kunthianam.

— Typus: *Pleurothallis floripecten* Rchb. fil. —

31. PLEUROTHALLIS FLORIPECTEN Rchb. fil. Bonpl. II. 25: caule secundario gracili, folio suo semel, bis, ter longiore, vaginis 4—5 arctis appressis nervosis ostio dilatato ovato mucronato dense fimbriato, vagina summa laxa, ampla, folii basin tegente, folio oblongo basi cuneato, apice attenuato minute bidentato, pedunculis subcapillaribus fasciculatis (4—5), dimidio longiori inferiori vaginulis arctis brevibus retusiusculis membranaceis 3—4 hinc inde vaginatis, parte superiori densissime florigera, bracteis arctis, vaginatis, ostio ovato acuto minutissimis, floribus distichis transversis alternantibus, flavidis (in sicco), sepalo summo ovali abbreviato, inferiori elongato apice suo subdivaricato bilobo, nervo utroque dorso carinato, tepalis ovatis acutiusculis minutissimis semi-uninerviis, labello brevissime unguiculato ovali basi obtuse sagittato trinervi, gynostemii rostello lato trilobo, lobis lateralibus ligulatis, medio lobo dentiformi, anthera dorsali. Blüthen höchst zart, wie bei einer Lepanthes, etwa 3 Linien lang, ⅓ Linie breit, sehr zahlreich. Granat. Wagener.

— Typus *Pleurothallidis roseopunctatae* Lindl. —

32. PLEUROTHALLIS TRULLA Rchb. fil. et Warszew. Bonpl. II. 114: aff. Pl. oblongae (similis tamen roseopunctatae) racemis 2—3, perigonio externo bivalvi basi coalito, tepalis cuneato oblongis acutis, labelli ungue ancipiti a lateribus compresso lamina ovata basi alte cordata. Caulis secundarius subtetragonus. Folium valde coriaceum oblongum utrinque attenuatum apice acutum: 3,5 pollices longum, 1½ latum. Spatha ultra pollicaris acuminata opaca. Racemi 3 basi et media partis ananthae 2,5 pollicaris univaginatae, pluriflori (—13), secundiflori, bracteae ochreatae cum apiculo, ovaria pedicellata longe exserta (3'''), perigonium externum mento angulato ante mentum constrictum, ultra medium bifidum, bivalve, valva utraque oblonga acuta, tepala cuneatoovata acuta, labellum tertia inferiori ancipiti unguiculatum, lamina ovata basi utrinque semicordata, carina membranacea introrsa in utroque margine, linea papulosa per medium, gynostemium gracile, apice cucullatum, denticulatum. Blüthen ⅔ der Grösse derer der P. roseopunctata: relative Längen dieselben. Peru. v. Warszew.

EFFUSAE.

— Typus *Pleurothallidis floribundae* Lindl. —

33. PLEUROTHALLIS HARPOPHYLLA Rchb fil. in Bonpl. III. 72: aff. quodammodo Pl. floribundae Lindl. et chamensi Lind. caule ancipiti, folio oblongo-lanceolato complicato hinc falciformi spicam paulo breviorem obcelante. — Caules primarii graciles paucivaginati. Caules secundarii bipollicares, nunc paulo longiores. Folium pollicare basi rotundato cuneatum, dimidium pollicem longum. Pedunculus gracilis solitarius seu geminus. Flores flavidi. Sepalum superius lanceolatum acutum; inferius oblongum apice bidentatum. Tepala breviora cuneato-lanceolata serrata. Labellum oblongo-ligulatum obtusum, basi utrinque rotundato auriculatum, per discum tricarinatum. Gynostemii gracilis clavati cucullus serrulatus. Granata: Ocanna. Wagener.

34. PLEUROTHALLIS ROSTRIFLORA Rchb. fil. Linnaea XXII. 827. Huc: Pl. longirostris Focke! Bot. Z. 1853, 341: caule monophyllo terete folio breviore, folio spathulato-lanceolato recurvo emarginato utrinque attenuato basi plicato, scapo erecto pauci-

floro axillari folio triplo breviore, sepalis subcarnosis ovatis sensim in acumen longum lineare productis, supremo basi conduplicato concavo incurvo, lateralibus connatis apice vix liberis basi utrinque, plicatis triplo minoribus spathulatis aristatis integris uninervibus, labello breviori linguaeformi obtusissimo medio dilatato. Epiphyta caulescens. Caulis teres monophyllus, folio spathulato-lanceolato recurvo marginato utrinque attenuato basi plicato brevior, 5 centim. longus. Scapus erectus 1—2 florus gracilis, folio triplo brevior, viridis. Perianthium connivens, triquetrum, caput avis (inprimis grallatoris cujusdam) referens. Sepala aequilonga, ima basi concreta, ovata, in acumen longum lineare attenuata, subcarnosa; supremum basi concavum, conduplicatum, incurvum; lateralia connata, apice vix libera, vel potius emarginata, basi convexa utrinque plicata, acumine canaliculato. Petala triplo minora, spathulata, integra, in aristam attenuata, uninervia, nervo extus prominulo. Labellum linguaeforme, obtusissimum, medio dilatatum, marginibus conniventibus, a medio recurvo, apice incurvo, lamina interiori subglandulosa, petalis brevius, columnae paralellum. Columna semiteres, recurva, basi cum labello articulata, flavescens, labello vix brevior, clinandrio lacero. Anthera conica, unilocularis, purpurea. Pollinia 2 rotundata, compressa, sulphurea. Ovarium sulcatum, incurvum, triquetrum. Flores ochracei. Habitat in districtu Para Surinamensi. Decembri.

— Typus *Pleurothallidis truncatae* Lindl. —

35. PLEUROTHALLIS TRUNCATA Lindl. Rchb. fil. in Bonpl. III. 240: caulis gracilis teretiusculus spithamaeus, folium pergameneocoriaceum a basi rotundata seu cuneata oblongum subito acuminatum, quadripollicare, unum et dimidium pollicem latum. Spatha tenuis lancea semipollicaris, basi gutturosa. Racemi fasciculato congesti folium subaequantes. Bracteae ochreatae hyalinae retusae. Flores flaveoli parvuli. Sepalum superius ovato triangulum concavum, sepalum inferius ovale concavum; tepala ligulata apice cucullato contracta retusa cum angulo protruso in medio; multo breviora; labellum transversum antice retusum cum apiculo nunc evanido utrinque involutum; gynostemii gracilis recti cucullus bene evolutus. Andes of Quito. 1848. Nr. 679. Jamieson.

36. PLEUROTHALLIS NAVILINGUIS Rchb. fil. in Bonpl. III. 72: aff. et similis Pl. truncatae Lindl. labello ligulato antice acuto naviculari, sepalo utroque aequali oblongo-ligulato. — Caulis secundarius gracilis trivaginatus tri- ad quadripollicaris. Folium oblongo-cuneatum acutum. Racemi 3 abbreviati folio duplo breviores. Flores angustiores et obtusiores et minores, quam in Pl. truncata. Sepalum utrumque oblongo-ligulatum; perigonium externum igitur exacte bivalve. Tepala ligulata obtusa minuta. Gynostemii clavati cucullus triangulus elevatus in margine postico. Ocanna. Granata. 5000'. Wagener.

— Typus *Pleurothallidis obovatae* Lindl. —

37. PLEUROTHALLIS OCTOMERIAEFORMIS Rchb. fil. Bonpl. II. 25: pedalis, caule secundario quadrialato, valido, vaginis jam emarcidis, folio satis coriaceo basi cuneato, obovato, acuto, pedunculis capillaribus abbreviatis numerosis basin usque floridis 3—5 floriferis, bracteis cucullatis acutis pedicellis subaequalibus, floribus hyalinis (flavis), mento parvo, sepalo summo lanceolato, inferiore basi coalito subaequali, tepalis aequalibus, labello ligulato acuto basi brevissime obtuseque sagittato, unguiculato, per mediam lineam intruso, gynostemio gracili clavato, dimidio superiori alato, androclinii limbo fimbriato. Verwandt mit Pl. hypnicola, welche stumpfe Sepala, ganz kleine Tepala und verschiedene Statur hat. Blüthen $1\frac{1}{2}$ Linien lang Caracas. 5000' October. Wagener.

Obs. Haec species nuper in Foliis (IX. Pleurothallis pag. 22. n. 125) ab ill. Lindl. ad Pleurothallidem obovatam Lindl. reducitur. Eadem esse docetur Pl. albida Lindl. Et in herbario Lindleyano planta forsan bene congruens adest. Nihilminus nomen non accipio. Descriptio enim Specklinіae obovatae Lindl. (B. Reg. XXV. 1839. Misc. 137) habet: „folio coriaceo obovato emarginato". Nunc dicuntur „obovata obtusa". Hinc certe confusio duarum specierum et nomen obovatae reponendum ad tempus, quo planta foliis emarginatis denuo reperiatur.

— Typus *Pleurothallidis Lindeni* Lindl. —

38. PLEUROTHALLIS LINDENI Lindl. Ann. Nat. Hist. XII. 397. Rchb. fil. Bonpl. II. 25. Colonie Tovar. 5000' Febr.

var. *pumila* Rchb. fil. in Bonpl. III. 72: spithamaea, folio tripollicari, vix pollicem lato, racemo bifloro, flore elongato, sepalo inferiori lanceolato. Ocanna. Nov. Granat. 6000'. Wagener.

var. *gigantea* Rchb. fil. in Bonpl. III. 240: folio ultrapedali, quatuor pollices lato, fasciculo racemorum abbreviato, sepalo inferiori valde dilatato cymbiformi, toto flore abbreviato. Valley of Lloa, on the trunk of a tree. 326. Jamieson.

Obs. Huc, sc. ad Pl. Lindeni referendam esse Pl. secundam Endl. Pöpp. 851 jam in Bonpl. III. 72. dixi. Attuli labellum false pictum, directionem inflorescentiarum falsam, eas in specimine typico excepta una decurva omnes decisas. Ill. Lindley contradicit. Contradicat. Ille vidit iconem, ego iconem et typos! —

— Typus *Pleurothallidis mesophyllae* A. R. Gal. —

39. PLEUROTHALLIS (Aggregatae velutinae) PANTASMI Rchb. fil. in Bonpl. III. 224: affinis Pl. mesophyllae A. Rich. Gal., caulibus elongatis tripteris, apice dilatato in folia oblonga acutiuscula dilatato, spatha abbreviata, racemo solitario abbreviatissimo, sepalo inferiori bifido, tepalis rhombeis, labello ligulato basi utrinque angulato, nervis 2 in basi lamellisque geminis, androclinii margine dentato. Insignis caule secundario subsex—septempollicari apice adeo alato dilatato, ut folium ipsum summa latitudine suprabasilari vix ter sit latius. Bracteae triangulae acutae. Spatha parva. Flores duplo minores, quam in Pleurothallide pubescenti Lindl., illis Pl mesophyllae aequales. Sepalum superius oblongum. In monte Pantasmo Nicaraguae Januario 1848, nec non in Segovia. Oersted.

— Typus *Pl. chamensis* Lindl. —

40. PLEUROTHALLIS TRIPTERIS Rchb. fil. Linnaea XXII. p. 829. Rchb. fil. in Bonpl. II. 25. Caracas. Wagener.

Obs. Nescio qui ludibrio cum Pl. sicaria Lindl. in „Foliis" conjuncta, quae labello et tepalis toto coelo abhorret. Huc: Pl. trigonopoda Kl. in Otto et Dietr. Allg. Gtz. XXI. n. 46. Caule trigono deorsum attenuato, dorso carinato, antice canaliculato alato in folium carnosocoriaceum strictum oblongum acutum brevius sensim ampliato; vagina ovato lanceolata, acuminata costata carinata arida; racemo perbrevi bifloro; floribus lilacinis elongatis basi gibbosis; perigonii exterioris profunde tripartiti deflexi laciniis elongatis acuminatis alutaceis lineis tribus purpureis ornatis, interioribus rectis spathulatis acutis, exterioribus duplo brevioribus striis purpureis paralellis quinque vestitis, labello integro ligulato deflexo obtuso lilacino-marginato centro excavato; columna clavata incurva striis lilacinis parallelis tribus notata, apice tridentata. Venezuela. Wagener.

41. PLEUROTHALLIS CHAMENSIS Lindl. Rchb. fil. in Bonpl. III. 72. Perigonium flavum seu brunneum. Ocanna Nov. Granat. Martio. 6000'. Wagener. — Pl. triangularis Klotzsch. Rchb. fil. Bonpl. II. 25. Caracas. 6000'. November. Wagener.

42. PLEUROTHALLIS IMMERSA Lind. et Rchb. fil. in Bonpl. III. 223: aff. Pl. bicarinatae Lindl. folio cuneato oblongo apice obtusato, pedunculo superne flexuoso folio longiori, in canali nervi medii immerso, tepalis carinatis, sepalo inferiori apice bidentato, tepalis a basi cuneata ovatis apiculatis, labelli rhombei nervis lateralibus carinatis, gynostemio clavato elongato. Caulis secundarius teres folio multo brevior. Folium quadri—quinquepollicare sub apice unum et dimidium pollicem latum. Pedunculus per duas tertias pauciflorus, non floridus immersus in nervi medii canalem eundem arcte cingentem. Racemi rhachis flexuosa. Bracteae arcte vaginaeformes sub pedicellorum insertione insertae, apice triangulo acuto ovarii pedicellati tertiam quartamve occupantes. Sepala intus velutina magnitudine illorum Pl. bicarinatae, brunnea. Tepala et labellum plus duplo breviora. E Nova Granada a cl. Linden introducta.

43. PLEUROTHALLIS FOCKEI Lindl. Folia IX. Pleurothallis N. 128: Huc: Pleurothallis tricarinata Focke in v. Mohl et v. Schlechtendal Bot. Zeitg. 1853. 339: caule nudo monophyllo terete, folio longiore, folio elliptico acuto crasso convexo, spica multo breviore pauciflora, spatha cucullata, sepalis carinatis conniventibus, supremo breviore attenuato, lateralibus connatis apice liberis basi gibbosis, petalis spathulatis acuminatis denticulatis, labello cordato acuto unguiculato intus glanduloso-hirto, clinandrio antice utrinque marginato. Epiphyta caulescens. Radices filiformes. Caulis monophyllus, teres, nudus, antice sulcatus, folio longior, decimetri fere longitudine. Folia elliptica, utrinque acuta, carnosa, convexa, juniora purpureo marginata 6 cent. longa. Spica brevis, pauciflora (2—3), axillaris seu ad basin folii orta, gracilis, purpurea, ad internodia squamis minutis acutis amplexicaulibus bracteata, folio incumbens, rhachide centimetrum longa. Spatha marcescens, fusca, cucullata, pedunculum spica ad basin amplectens. Perianthium connivens. Sepala oblonga, supremum attenuatum, paullo brevius, ima basi lateralibus connatum, intus 3 striis purpureis pictum, lateralia subcarnosa, sibi invicem connata, apice tantum libera, basi gibbosa, omnia postice carinata, apice et margine sordide flava, basi purpurea. Petala dimidio minora, spathulata, acuminata, minutissime denticulata, uninervia, diaphana. Labellum cordatum, acutum, glanduloso-denticulatum, cucullatum, demum expansum, unguiculatum, purpureum, ecallosum; lamina interiore glanduloso birta. Columna semiteres arcuata, purpurea, clinandrio antice utrinque emarginato. Anthera conica, unilocularis, clinandrio immersa, purpurea. Pollinia duo ovata dimidiata convexa. Ovarium sulcatum, crassiusculum, breve. Capsula oblonga, hexagona. Habitat in districtu Para Surinami. Florebat Novembri et Decembri.

— Typus *Pleurothallidis lepanthiformis.* —

44. PLEUROTHALLIS QUITENSIS Rchb. fil. in Bonpl. III. 240: subaffinis Pl. ciliari et lepanthiformi, vaginis lepanthidinis nervosis ostio tantum ciliolatis, folio a basi lineari lanceolato acuto margine cartilagineo, racemis tenuibus congestis, sepalo impari lanceolato acuminato amplo, sepalis inferioribus duplo angustioribus, tepalis ligulatis obtusis emarginatis abbreviatis, labello ligulato cordato basi obsolete tricarinato tepalis longiori; gynostemio gracili clavato. Flores glaberrimi flavidocuprei sepalorum basi atrata in sicco: subclausi. Quito. 1847. Nr. 65. Jamieson.

— Typus *Pleurothallidis pubescentis* Lindl. —

45. PLEUROTHALLIS TRUXILLENSIS Rchb. fil. Bonpl. II, 25.: caule secundario 2—3 articulato valido, folio oblongo acutiusculo valde coriaceo; pedunculis 2—3 folio brevioribus dense puberulis, vaginis arctis retusis, floribus bilabiatis, sepalo summo ligulato acuto, inferiore oblongo apice bidentato, tepalis obtuse rhombeo cuneatis antice serrulatis, labello unguiculato basi ovato dein ligulato margine serrulato, lamellis 2 semilunatis in parte ovata, gynostemii clavati androclinii fimbriolato. Pleurothallide pubescente paulo minor. Spica 4—5 flora. Flores albi maculis striisque lilacinis. Illa species habet pedunculos tenuius puberulos, vaginas ampliores, sepala latiora, labellum diversissimum. Truxillo. 6000'. December. Wagener. — Huc porro: Pl. Bufonis Kl. in Otto et Dietrich Allg. Gartenz. 1854. 22. Juli: caule secundario abbreviato, folio oblongo subrecurvo crasso carnoso coriaceo brevissime acuto, subtus carinato, basi acuto, illo duplo longiore; spatha parva basilari; spica quinqueflora folio subduplo breviore, bracteis vaginatis tribus sterilibus inferne instructa; floribus bilabiatis elongatis pallide virescentibus atro-purpureo-punctatis striatisve puberulis; perigonii foliolis exterioribus quadrilinearibus extus puberulis, summo ligulato striis atro-purpureis quinque notato, inferiori oblongo apice acute bidentato; perigonii foliolis interioribus obovatis acutis unguiculatis, basi incrassatis, margine purpureomaculatis hispido-ciliatis brevioribus; labello aequilongo oblongo acuto, atro-purpureo-punctato, inferne attenuato, margine atroserrato, gynostemio purpureo incurvo glabro superne acuto dentato marginato; toto pedunculo, bracteis, ovario, perigonii foliorum exteriorum pagina externa sericeo velutinis. Folium 2¼ pollices longum, pollicem latum. Venezuela. Wagener.

— Typus *Pleurothallidis macrophyllae.* —

46. PLEUROTHALLIS ELEGANS Lindl., Dendrobium elegans Hb.! B. Kunth! I. 358. Rchb. fil. Bonpl. II. 25: caule secundario subpedali, valido, basi dense membranaceo tenuissime vaginato, vagina basilari summa nitida, vagina in medio caule membranacea minutissime nigropunctata apice retuso supra nervum medium apiculata, dorso carinato, folio coriaceo oblongo apice attenuato rotundato, basi subito ac brevissime cuneato, 6 pollices longo, medio 2¼ pollices lato, spatha subcoriacea arpophyllacea ancipiti, ab apice ad medium ventrem tantum oblique fissa, spicis 5 validis, polyanthis, a basi ad apicem floridis, folium aequantibus superantibusve, bracteis ovatis acutiusculis ima tantum basi vaginantibus, ovaria pedicellata subaequantibus, floribus bilabiatis, sepalo summo oblongo acuto, inferioribus sepalis aequalibus ima basi coalitis, tepalis ovatis acutiusculis dimidio minoribus, labello adhuc breviore, ovato, laevi, basi ante unguem brevissimum plicula transversa ornato, gynostemio gracili, androclinio membranaceo. Flores illis Pl. Hartwegii aequales. — Pl. elegans Lindl., galeata Lindl., Hartwegii Lindl., laevigata Lindl., macrophylla Lindl. (floribunda Endl. Pöpp.), velatipes Rchb. fil., Cassidis Lindl. conjungendae sunt, nec ob longitudinem spicarum separandae.

47. PLEUROTHALLIS XANTHOCHLORA Rchb. fil. in Bonpl. II. 24. Merida. Wagener.

AGGREGATAE.

— Typus *Pleurothallidis cordatae* Lindl. —

48. PLEUROTHALLIS CORDATA Lndl. O. p. 5. Rchb. fil. in Bonpl. II. 26. Pedalis et ultra, caule primario polyrrhizo crasso, caule secundario biarticulato, internodio superiori longissimo, inferiori brevissimo, folio crasso chartaceo orbiculari, altissime cordato, apice acutato retusiusculo (spatha decidua? nulla?), floribus pluribus, heterochronis, abbreviatis, sepalo summo oblongo obtuse acuto, inferiori orbiculari subacuto, sepalis lineari lanceolatis acutis ciliatis subaequilongis, labello orbiculari carnosissimo basi obtuse cordato, gynostemio retuso. Peru Ruiz! Auctor flores non vidersi.

49. PLEUROTHALLIS CORIACARDIA Rchb. fil. Bonpl. II. 26: ultra pedalis, internodio superiori longissimo, vaginis tenuibus abbreviatis arpophyllaceis, folio horizontali, valde coriaceo, lucidissimo, lato oblongo acutato, apice retuso tridentato, basi obtuse cordato, spatha florali membranacea acuminata, floribus aggregatis, sepalo superiori oblongolanceolato, inferiori subaequali, tepalis lineari lanceis margine subtiliter denticulatis, labello lanceo basi obtuse sagittato, quater longiori, quam lato, carnoso, medio sulcato, gynostemio truncato. Pleur. cordata Lndl. in Hartweg. Pl. Popayan exsicc.

50. PLEUROTHALLIS (Aggregatae: Laeves: Cordatae) CARDIUM Rchb. fil. Bonpl. II. 26: caule secundario elongato, internodio superiori longissimo, folio pergameneo oblongo apice acuminato, retuso bi-tridentato, basi alte cordato, spatha membranacea obtusa, floribus patulis aggregatis 6—10, bracteis vaginantibus retusis hyalinis, perigonio tenui (ejusdem substantiae ac Pl. Lindenii), sepalo summo lanceolato, inferiori subaequali paulo latiori, tepalis linearisetaceis divaricatis dimidio brevioribus, labello breve unguiculato, ligulato, triangulo, basi angusta cordato, ter-quater longiori quam lato, densissime muriculato, gynostemio retuso abbreviato. Spectabilis Pleurothallis. Folia horizontalia, 4—6 pollices longa, supra basin 3—3½ pollices lata. Flos expansus ab apice supremo ad apicem inferiorem prope pollicem longus, carneus, nervis ac labello atropurpureis. Caracas. 6000′. December. Wagener.

51. PLEUROTHALLIS CORDIFOLIA Rchb. fil. et Wagener Rchb. fil. Bonpl. II. 25: gracilis, folio (semper inaequali?) orbiculari, subito acutato, basi cordato, spatha minuta, flore solitario, sepalo summo ligulato obtuso, inferiori duplo latiori, excavato, apice bidentato, sepalis linearisetaceis divaricatis ciliatis, labello oblongo basi subsagittato, unguiculato, duplo longiori, quam lato, gynostemio retuso. Omnibus par-

tibus dimidium Pl. Cardii aequans. Flos uti in illo. Caulis aequilongus. Folium supra basin prope aequilatum. Caracas. 4000'. October. Wagener.

52. PLEUROTHALLIS MACROCARDIA Rchb. fil. in Bonpl. III. 72: aff. Pl. cordatae floribus maximis, labello oblongo subcordato acuto apicem versus serrato, tepalis lineari-lanceolatis apice serratis. — Caulis secundarius quinquepollicaris. Folium sex pollilices longum, plus duos latum, oblongo-acuminatum alte obtuseque cordatum. Flores pollicem longi, bivalves. Sepalum utrumque oblongo-lanceolatum. Tepala cum labello aequilongo sepalis paulo breviora. Labelli unguis lineis transversis notatus: lamina trinervis, plicula in basi. Gynostemium laeve crassum Pl. cordatae. Flores brunnei. 5000' Ocanna Nov. Granat. Wagener.

53. PLEUROTHALLIS MONOCARDIA Rchb. fil. in Bonpl. III. 72: aff. Pl. ionanthae Rchb. fil. foliis quadruplo majoribus obovato-lanceis bene cordatis, floris bivalvis sepalo superiori ligulato, inferiori transverso óvato acuto, tepalis falcatis linearibus, labello anguste ligulato basi cordato, acuto. — Caulis quinquepollicaris. Folium tres pollices longum, plus unum supra basin latum, pergameneum. Flos quam in Pl. ionantha duplo major; „brunneus". Ocanna. Wagener. 6000'.

54. PLEUROTHALLIS CARDIOSTOLA Rchb. fil. in Bonpl. II. 26: caule secundario compresso teretiusculo, folio basi cordato, lobis contiguis oblongo acuminato, inverse deflexo, pedem prope caulis tegente, spatha brunnea, — flore inverso (solitario?) flavo, sepalo summo ovato acuto, inferiori (hic superiori ex inversione) orbiculari acuto, tepalis oblongis acutis dimidio minoribus, labello minuto, basi cordato, aequaliter obtuse trilobo. Flores pallide flavi, diametro 5 linearum. Folium ultra 6 pollices longum, medio et basi duos pollices latum. Caracas. 6000'. Julii. Wagener. Rchb. fil. in Xenia Orch. Tab. 28. p. 72.

55. PLEUROTHALLIS MICROCARDIA Rchb. fil. in Bonpl. III. 72: aff. Pl. undulatae Endl. Pöpp. folio a basi minute cordata lineari-ligulato, acuminato undulato, labello triangulo cordato obtuso papuloso minuto; sepalis longe attenuatis. — Caulis secundarius longissimus usque octopollicaris, tenuis. Folium tripollicare, vix dimidium pollicem supra basin latum. Flores angustissimi prope pollicem longi. Tepala uti in Pl. undulata, a basi lineari-lancea acuminata margine scabrido-ciliolata. — Ocanna. Nov. Granat. Wagener.

Obs. Cl. Lindley (Fol. IX) haec. „Stem very long, as much as 8", slender. Leaf 3"×½". Flowers very narrow, nearly 1". Petals as in P. undulata, linear-lanceolate, acuminate, scabrous od the edge." So far Rchb. and if there is no misprint in his description, this must be near P. grandiflora. But I have a specimen from himself, without flowers, and with stems only 3, not 8, inches high, and evidently close to P. tridentata.

Ad haec ego: caulem dixi *usque* octopollicarem. Caules non floridi adsunt vix bipollicares in altero specimine meo. Pleurothallidis grandiflorae folium bene evolutum quinquies latius; at omnia quae hujus habeo folia apice tantum abrupte angustata, dum in microcardia a parte suprabasilari angustata. Idem de sepalis valet. Pl. tridentata me judice longe recedit flore brevi, sepalo inferiori bifido et mibi Pl. discoideae Lindl. peraffinis videtur.

— Typus *Pleurothallidis undulatae* Endl. Pöpp. —

56. PLEUROTHALLIS CROCODILICEPS Rchb. fil. in Bonpl. III. 72: aff undulatae Pöpp. Endl.: caule secundario ancipiti, folio oblongo-ligulato acuto, pedunculo gracillimo valde elongato, labello rectangulo retuso abbreviato, gynostemio elongato clavato velutino (!). — Caulis secundarius adest quadripollicaris valde compressus alato-anceps. Folium pergameneum quadripollicare, unum pollicem latum apice acutum basi rotundatum ceterum subaequilatum. Pedunculus incluso ovario pedicellato bipollicaris. Bractea vaginiformis supra medium. Sepala ligulato-linearia subaequalia ringentia. Tepala linearia acuminata subaequilonga. Labellum a basi humerata cordata divergens, subito utrinque emarginatum apicem usque retuso-rotundatum; linea media

antice carinata; brevissimum. Flos illi Pleurothallidis undulatae paulo major, siccus livide violaceus. An cum Pl. gratiosa Rchb. fil. et hemirrhoda Lindl. ob pedunculos longe exsertos segreganda? — Ocanna. Wagener.

57. PLEUROTHALLIS PRUINOSA Lindl. B. Reg. 42. — Stelis? flavida Focke in Nederl. Tidsch. II. 202: folio oblongo lanceolato subcarnoso emarginato, pedunculo solitario capillari folium vix superante, sepalis concavis, lateralibus in unum connatis, petalis linearibus acutis, incurvis, labello subcordato sepalis petalisque breviore. Herba epiphyta, caespitosa. Caules filiformes, monophylli, folio aequilongi. Folium oblongo-lanceolatum emarginatum, planum subcarnosum, nitidum, 3—4 cent. longum. Pedunculus solitarius, axillaris, capillaris, folium vix superans, 2—3 florus. Flores minutissimi, sordide flavidi, bracteis vaginantibus suffulti. Perianthium globoso-connivens. Sepala concava, lateralia in unum conflata, supremum orbiculato-ovatum, acutum, extus incurva. Labellum petaloideum, subcordatum, sepalis petalisque brevius. Columna nana, crassa, Ovarium sulcatum. Capsula oblonga in pedunculum attenuata. Surinam supra arbores inter muscos. Majo.

Obs. Cf. Folia Orchidacea Lindleyana! Ad calcem Pleurothallidis: Pleurothallis flavida = Stelis. Ad calcem Stelidis: Stelis flavida = Pleurothallis.

58. PLEUROTHALLIS UNDULATA Endl. Pöpp. Rchb. fil. Bonpl. II. 26: spithamaea, caule secundario tenuiori, internodio superiori longe longissimo, folio horizontali pergameneo oblongo lanceolata margine undulato apice retuso tridentato, basi subinaequali cordato, spatha carinata acuta abbreviata, floribus fasciculatis hystheranthiis elongatis, sepalo superiori lanceolato, inferiori subaequali paulo latiori apice bidentato, tepalis linearilanceolatis, papillis obtusis in margine, tertia parte brevioribus, labello tepalis subaequilongo, anguste triangulo, minute sagittato, margine papillis asperulo, nervis lateralibus elevatis, gynostemio abbreviato truncato. Pampayaco. Pöppig.

— Typus: *Pleurothallis cochlearis* Rchb. fil. —

59. PLEUROTHALLIS COCHLEARIS Rchb. fil. in Mohl et Schldl. B. Z. 1852. 784: caule secundario tereti monophyllo, folio oblongo-lanceolato, apice leviter tridentato, basi cuneato, spatha univalvi carinata, rhachi spicae pauciflorae vaginata, bracteis vaginatis, perigonii phyllis externis inaequalibus, superiori phyllo lanceolato, angusto, membranaceo, lateralibus carnosis connatis cochleatis, lateralibus internis lanceolatis, acutis, membranaceis, gynostemio sublongioribus, labello cum gynostemio continuo, sagittato, unguiculato, complicato, medio carinato, gynostemio brevi, androclinio membranaceo, polliniis 2 materie viscinosa conjunctis. — 3—4 pollices alta. Sepalum superius albidum striis purpureis quinis. Sepala lateralia griseo purpurea maculata. Tepala albida stria una purpurea. Labellum purpureum marginibus viridi flavis. Columna flava. Mexico.

— Typus *Pleurothallidis tribuloidis* Lindl. —

60. PLEUROTHALLIS FALLAX Rchb. fil. Mss. Juni 1844. Rchb. fil. in Bonpl. III. 224: prope Pleurothallidem vittatam Lindl. cui haud stricte affinis: caespitosa, caulibus secundariis humillimis, folio spatulato obtuso, floribus subsolitariis, ovario papulis acutis hispido, sepalis ligulato triangulis, intus papulosis, inferiori vulgo bifido, nunc integro, tepalis linearibus acutis plus duplo brevioribus, labello ligulato acuto incrassato velutino. Planta pusilla. Flores carnosi tri — quadrilineares, cinnabarini. Bracteae ac vaginae caulis brevissimi scariosae albidae. Mexico Leibold! In monte Irasu Costaricae. Oersted.

Obs. Num cum Pl. tribuloide Lindl. vere congruat, nondum mihi perspicuum. Exacte examinatis typis Swartzianis de re disseram.

61. PLEUROTHALLIS SARCOPHYLLA Rchb. fil. in Bonpl. III. 224: nulli affinis, folio cuneato ovato apice retuso carnosissimo, spica biflora brevissima, sepalis apice conglutinatis. Planta pusilla caespitosa. Folium pollicare apice obtusato tertiam pollicis latum subtus purpureo maculatum. Pedunculi brevissimi 1—8, uni—biflori, quo an-

cepa exoritur plantae locus. Bracteae ovaria aequantes. Flos purpureus obscurius guttulatus papillis filiformibus villosus. Mentum obtusangulum. Sepala triangula libera, apice conglutinata, quo oritur perigonium trifenestratum. Tepala spatulata gynostemio aequilonga. Labellum rhombeum, marginibus anticis minute denticulatis. Carina transversa in basi, carina utrinque margini parallela. Gynostemii cucullus utroque latere angulatus. Antherae protuberantia purpurea. (Pollinia?). — In Horto Schilleriano culta, Masdevallia maculata nominata, ex Caracas advenisse dicitur.

— Typus *Pleurothallidis Raymondi* Rchb. fil. —

62. PLEUROTHALLIS (Aggregatae: Papillosae) HYSTRIX Rchb. fil. Bonpl. II. 26: rhizomate repente, caule secundario dense vaginato, vaginis omnibus linearilanceis papillis deflexis asperrimis, folio coriaceo lanceo apice minute trimucronulato caule secundario longiore, floribus aggregatis paucis, vaginis bracteisque aequalibus retusis medio acutis, maculatis, extus puberulis, ovario puberulo, mento subnullo; sepalo summo triangulo acuto, inferiori ovato ab apice medium versus bifido, laciniis triangulis, tepalis basi obtuse quadratis, dein parte superiori linearibus apice tereti-usculo carnosis, labello oblongo obtuso antice utrinque minute sinuato, gynostemio alato, alis inflexis, alula postica androclinii denticulata arrecta. Haec planta Pleurothallidi Raymondi persimilis, sed omni parte dimidio minor. Folium vix ultra duos pollices longum, medio tertiam pollicis latum. Caracas. Wagener.

63. PLEUROTHALLIS RAYMONDI Rchb. fil. (Duboisia Raymondi und Dubois-Raymondia palpigera Karsten) Rchb. fil. Bonpl. II. 26. Nulla adest causa separandae hujus speciei a Pleurothallide. Tepala memorabilia, apicibus nunc cruciata. Pollinia perplana. Caracas 6000'. Wagener. Toto anno.

— Typus: *Pleurothallis Wageneriana* Kl. —

64. PLEUROTHALLIS (Aggregata) WAGENERIÁNA Kl. in Otto et Dietr. Allg. Gtz. 1852. 275. Rhizomate funifero, squamis obtecto, caulibus secundariis 2—3 articulatis, vaginis 2 appressis obtusis subintegris obtectis, folio crasso carnoso angusto primum conduplicato deinde canaliculato, basi cuneato, apice attenuato retuso, floribus binis brevi pedunculatis, perigonii foliolis 3 exterioribus ringentibus crassis carnosis sordide flavidis, internis membranaceis sulcatis acutis flavidis striis parallelis purpureis notatis externis triplo minoribus, labello trilobo atropurpureo tumido, antice tuberculoso scabro, perigonii foliola interiora aequantes; pedunculo bracteis hyalinis obtusis binis aut tribus subcucullatis vestito. Venezuela. Wagener. — Rchb. fil. in Bonpl. II. 26. Caracas. 6000'. Aug. Wagener.

Obs. A cl. Lindl. infauste ad Pl. vittatam relata (Fol. IX), quae pubescentiflora. Pl. vittata tepala habet rhombea, apice serrata; haec ligulata acuta integerrima. Pl. vittatae labellum basi biauriculato-sagittatum, hujus exauriculatum. Vittatae portio antica labelli semiovata, Wagenerianae ligulata retusa. Vittatae discus labelli laevis, Wagenerianae rugoso-verruculosus.

— Typus *Pleurothallidis Octomerioides* Lindl. —

65. PLEUROTHALLIS RIGIDIFOLIA Rchb. fil. in Bonpl. III. 224: ex systemate artificiali pone Pleurothallidem retusam Lindl. (nec sicariam Lindl. quae ex ipsius ill. auctoris legibus ob pedunculos bi—trifloros in „Effusis" collocanda), melius autem pone Pleurothallidem Hartwegii Lindl. 1842: folio lanceolato utrinque optime attenuato rigidissimo, floribus bivalvibus oblongis, sepalis inferioribus alte bifidis, tepalis linearibus, labelli trilobi lobis lateralibus triangulis margine externo denticulato, lobo medio ligulato. Planta ultrapedalis. Caulis secundarius crassus robustus (anceps? multangulus?) bivaginatus in specimine, quod prostat, cinereus, spithamaeus. Folium coriaceum infra (in sicca) sulcato striolatum spithamaeum medio ubi latissimum vix bipollicare. Flores numerosi aggregati ex pulvinari spatharum. Sepala oblongoligulata. Tepala lineari ligulata subfalcata. Labellum multo brevius angustum. Gynostemium crassum androclinii membrana parca. Chachapoyas. Mathews. (Herb. ill. Boiss.)

66. PLEUROTHALLIS OCTOMERIOIDES Lind. in Comp. bot. Mag. II. 354. Huc: *Pleurothallis* (Aggregatae) *elongata* Hort. Hamburg. — Klotzsch in app. ind. sem. h. Berol. 1853. — Caulis vaginis quatuor albidis obtusis, dorso plus minusve carinatis, minutissime transversim atrocoeruleo fimbriatis; folio oblongo elliptico crasso coriaceo, supra canaliculato, subtus pallide nigrescente, apice tridentato, basi inflexe petiolatim attenuato; floribus 2—4 divaricatis, singulis bracteato-vaginatis, bracteis bifidis albidis, pilis atro-purpureis adpressis stellatis conspersis; perigonio exteriore sordide flavido profunde trifido, basi rubescente, laciniis strictis crassis latis obtusis, perigonii foliolis interioribus angustioribus acutis laete flavidis; labello atro-purpureo curvato obtuso integro, intus excavato aureo, basi attenuato. — Caulis secundarius crassitudine pennae corvinae, 4—6 pollices longus. Folium 3—5 pollices longum 12—13 lineas latum. Pedicelli 2 lineas longi Germen incurvum, rubescens, obsolete trigonum. Perigonium 4 lineas longum. Laciniae exteriores 2 lineas latae. Laciniae interiores lineam latae. Labellum 2 lineas longum. Gynostemium alatum incurvum, sesquilineam longum. Anthera unilocularis. Pollinia 2 integra. — Patria? Floruit in horto Berolinensi M. Octob. 1853. (Kl)

67. PLEUROTHALLIS MIQUELIANA Lindl. Fol. IX. Pleur. n. 93: Huc: Specklinia? Miqueliana Focke in Nederl. Tidsch. II. p. 199: caulibus folio lanceolato supinato aequalibus, tepalis lateralibus connatis apice liberis facile partibilibus, supremo libero ligulato, petalis multo brevioribus lanceolatis, labello linguaeformi, pedunculo uni — vel bifloro, rhizomate filiformi. Rhizoma repens, filiforme. Radices fibrosae. Caules graciles, erecti, monophylli, vaginati, longitudine folii. Folium lanceolatum, coriaceum, resupinatum, apice recurvum, basi plicatum purpurascenti-viride. Pedunculus brevis capillaris, in sinu baseos folii, uni — vel biflorus. Perianthium connivens. Sepala lateralia dimidiata acuta, connata, apice libera, facillime partibilia, labello supposita, basi saccata, atropurpurea, apice ochracea, supremum liberum ligulatum acutum, lateralibus longius, tribus striis purpureis pictum, apice ochraceo recurvo. Petala multo breviora membranacea, lanceolata, abrupte acuta, columnae parallela diaphana, una stria purpurea picta. Labellum linguaeforme obtusum, crassiusculum, planum, basi gibbosum, petalis longius, atropurpureum. Columna petalis brevior, semiteres, erecta, leviter incurva, cum ovario continua, membranaceo alata, lutea, intus purpureo picta. Anthera unilocularis. Pollinia duo. Ovarium sulcatum, breve. Supra truncos Crescentiae Cujete ad rivum Para. Novembri.

— Typus: *Pleurothallis Ceratothallis* Rchb. fil. —

68. PLEUROTHALLIS CERATOTHALLIS Rchb. fil. Bonpl. II. 25: caule secundario spithamaeo valido pauci-longique articulato, vaginis articulis aequilongis mox laceris, caducis, folio oblongo lanceolato basi angustato, pedunculis fasciculatis abbreviatis nigro puberulis, bracteis arctis vaginatis acutis nigro puberulis, ovariis abbreviatis puberulis, mento valido obtusangulo, sepalo summo triangulo acutiusculo, sepalo inferiori ovato, apice breviter bicuspidato, tepalis ovatis, margine inferiori antice serrulatis, medio subito in ligulam linearem extensis sepalis aequilongis, labello basi obtuse humerato utrinque in lobum semifalcatum acutum divaricatum extenso ceterum obtuse pandurato, carinis 2 parallelis contiguis per discum, 2 semilunatis extrorsis, gynostemio incurvo, androclinio cucullato, denticulo utrinque falculato minuto, denticulo altero minuto utrinque in basi gynostemii, polliniis (2) compressis basi attenuata productis in glandula spuria minuta. Omnino affinis Pl. sicaria differt ovario glabro, labello etc. Flores virides, rufo nervati, 4—5 lineas longi, folium prope 5 pollices longum. Caracas. 6000'. Novbr. — Huc Pl. longipes Körnicke in Otto et Dietr. Allg. Grtz. 1855. Nr. 36: Pleurothallis (Aggregatae. Disepalae) caule secundario plus minus elongato, inferne tereti, superne valde compresso ancipite et latiori gracili, articulato; vaginis articulos paulo superantibus caulem totum arcte cingentibus superioribus glabris, inferioribus setis fusco-atris multopartitis deflexis demum evanescentibus vestitis; folio lanceolato, basi breviter attenuato, superne sensim acuminato, apice tridentato, supra nitido, obscure viridi, costa media canaliculato, subtus opaco,

flavo-viridi, carinato; floribus 1—3, brevi-pedicellatis; pedunculo bracteis lilacino-puberulis ornato; germine puberulo; perigonii foliolis exterioribus 2, intus pilosis viridibus, lilacino striatis, membranaceis, supremo lanceolato, acuto, altero e binis lateralibus connato, ovato-orbiculari, acuto, usque ad medium fisso, paullo convexo, intus basi nectario excavato instructo et labello breviter connato; foliolis interioribus oblique oblongis, longe falcato-attenuatis, pellucidis trinerviis, nervis inferne et apice lilacinis, viridescentibus, erectis, exteriores aequantibus; labello multoties minori, ovato-oblongo, obtuso, margine tenui-membranaceo albido medio utrinque in dentem adscendentem producto, intus et extus apice atro-purpureo, intus canaliculato; columna intus profunde canaliculata, utrinque ad antheram in auriculam subtiliter acuminatam sursus curvatam apice lilacinam producta, pulchre lilacino 5-striata, glabra; anthera subrectangulari, pallide flavida, apice leviter lilacino bimaculata.

— Typus *Pleurothallidis nudae* Rchb. fil. —

69. PLEUROTHALLIS NUDA Rchb. fil. Mss. Huc: Restrepia vittata Lindl. Journ. Hort. Soc. III. 1848. 314 c. xyl. Ex Columbia Linden: petalis a lata basi ciliata filiformibus recurvis, labelli ciliati convexi laciniis lateralibus minimis obtusiusculis. One oblong leathery leaf, which is rather shorter than the terete spotted stem. The flowers grow singly on a slender erect stem, about half the length of the leaf. Sepals are white, and the lower somewhat boatshaped; the petals are spotted with deep rose, extended into a long slender process as long, as the dorsal sepal, and turned backwards. The lip is dull yellow, striped with deep rose, shorter than the double anterior sepal, and blunt.

Huc: Restrepia nuda Kl. in Otto et Dietr. Allg. Grtz. p. 275: 28. Aug! 1852: caulibus secundariis caespitosis, basi vaginatis teretibus, fol. carnosis solitariis acutis planis versus basin attenuatis, floribus pedunculatis paucis nudis, perigonii foliolis 2 candidis rubro-striatis elongato-lanceolatis, acuminatis, supremo trinervio, inferne 4 nervio, interioribus basi lanceolato dilatatis candidis, margine denticulatis, dorso acumineque setiformi, purpureis; labello purpureo elongato-obovato acuminato magno fimbriato ima basi auriculato; gynostemio clavato.

Huc: *Pleurothallis hemirhoda* Lindl. in Paxt. Fl. g. III. 612 (Novb.). Restrepia vittata Lindl. J. H. S. III. 315 c. xyl. No positive difference appears to exist between the genera Pleurothallis and Restrepia except that the former has 2 and the latter 4 pollen masses. Usually however the latter have solitary, handsome, highly coloured flowers and a pair of ears at the base of the lip, and judging from this alone, we referred the present plant to Restrepia. But having now had the opportuni ty of examining the pollenmasses, we find that it is a true Pleurothallis, to which genus we are obliged to refer it, necessarily changing the specific name, because there is already a Pl. vittata from Mexico.

70. PLEUROTHALLIS GRATIOSA Rchb. fil. in Bonpl. II. 25: caule secundario elongato, folio oblongo basi subcuneato, apice angustato, acuto, bi-tridentato, pedunculo gracili longiarticulato, cum ovario pedicellato folium subaequante, sepalis ab ovata basi lanceoacuminatis subaequalibus, inferiori ex duobus omnino coalito, tepalis linearisetaceis carnosulis, subaequilongis, labello sepalis quinquies breviori, orbiculato, basi humerato, utrinque setaceofalcato, setula dimidiae laminae latitudini subaequali, disco carnoso tricarinato, margine puberulo, limbo ciliato, gynostemio gracili, androclinio subcucullato postice unidentato. Restrepiis subsimilis, quae polliniorum numero diversae. In hac quidem specie pollinia non vidi, inde Restrepia forsan erit. Caulis secundarius basi laxe vaginatus, tum liber, prope tres pollices altus. Folium tres pollices longum, medio duos pollices latum. Pedicellus tenuis, sesquipollicaris. Ovarium cum pedunculo prope pollicare. Sepala subaequalia, sex lineas longa, apice angustata, nivea, maculis purpureis in basi. Caracas 5000'. Martio. Wagener. Rchb. fil. Xenia Orchidacea Tab. 28. pag. 71.

71. PLEUROTHALLIS ASPASICENSIS Rchb. fil. in Bonpl. III. 73: similis „Pleurothallidi

pedunculari" Hook. folio lanceolato utrinque attenuato, pedunculo paucivaginato ultrapollicari, flore ringente, sepalis oblongo-lanceis liberis, tepalis falcatis duplo brevioribus, labello tepalis aequilongo ligulato antrorsum attenuato retuso ante basin utrinque falcula extrorsa aucto, carina per regionem antebasilarem transversa, carinula utrinque ante falculam margini parallela, gynostemio clavato gracili anguste alato labello aequilongo. — Caulis secundarius tri- seu quadripollicaris, vaginis magnis jam laceris vestitus. Folium spithamaeum, medio pollicem latum, spatha mediocri. Flos extus puberulus. Ocanna. Wagener.

72. PLEUROTHALLIS BREVIPES Focke Tidsch. voor de Wis. nat. Wetsch. II. p. 98: caulibus folio oblongo utrinque acuto subaequalibus, sepalis ovatis attenuatis, lateralibus basi tantum connatis aliquid subgibbosis, petalis duplo fere minoribus ovato rhomboideis integerrimis aristato attenuatis, labello linguaeformi aristato-apiculato magno fimbriato ante basin involuto. Caulis monoph., gracilis, articul., vaginat.. Vag. fibrosae, demum emarcidae, totum fere caulem vestientes. Fol. oblongum, vel oblongo-lanceolatum, utrinque acutum, coriaceum, convexum, 3—4, 5 cent. longum. Pedunculi plurimi, articulati, bracteati, apice racemosi, ad basin paginae inf. folii erecti multiflori. Fl. minuti, patuli, fulvo-purpurei, brevissime pedicellati, bracteis pedicellum amplectantibus suffulti. Sep. subaequalia, ovata, attenuata, supremum erectum, lateralia basi tantum connata, ibique subgibbosa, recurva, flavo purpurea 3 mm. longa. Petala duplo fere minora, ovato-rhomboidea, integerrima, aristato-attenuata, patula. Labellum linguaeforme, subaequale, aristato-apiculatum, margine utroque tenuissime fimbriato, ad basin involuto, cum basi brevissime fimbriato, ad basim involuto, cum basi brevissima producta columnae articulatum, breve unguiculatum, recurvum, atropurp., disco flavo. Columna labello petalisque brevior, incurva marginata, flavida, clinandrio tridentato. Anth. unilocularis, subglobosa, flavida. Pollinia duo rotunda, plano compressa, materie viscida apice cohaerentia. Ovarium brevissime sulcatum, purpureum. Hab. in sylvis ad rivum Para, supra arbores toto anno florens.

73. PLEUROTHALLIS BIFLORA Focke in Tidsch. Wetensch. II. 1849. p. 197: caulibus folio ovali acuto marginato subaequalibus, pedunculis axillaribus binis brevibus bifloris, sepalis lanceolatis, lateralibus ad medium usque connatis, patentibus, petalis apicem versus ciliatis acuminatissimis, labello oscillante lineari linguaeformi, margine fimbriato, apice integro aristato recurvo. Radices filiformes, fuscescentes. Caules monophylli folii longitudine, numerosi, erecti, bracteis membranaceis, cucullatis, fuscis vestitis. Folium ovale, acutum, coriaceum convexum marginatum, 3—3, 5 centim. longum, 2 centim. latum. Pedunculi bini, breves, filiformes, ad basin paginae inferioris folii adpressi, biflori. Perianthium patens. Sepala lanceolata, supremum erectum apice flavum, lateralia ad medium usque connata, reflexa basi gibboso saccata, ad juncturam convexa, purpurascentia, 6 millim. longa. Petala multo minora, lineari-oblonga, acuminatissima, margine apicem versus ciliato diaphana, flavescentia. Labellum lineari-linguaeforme, petalis longius, margine usque ad medium fimbriatum, apice angustato in aristam recurvam attenuato, cum columnae basi horizontaliter producto articulatum, oscillans, atropurpureum. Columna petalis aequilonga cum ovario continua, membranaceo-marginata, alba, clinandrio anticé bidentato, posticé fimbriata. Anthera globosa, unilocularis, clinandrio alveolo immersa, violacea. Pollinia duo pyriformia, plano convexa, lutea, apice materie viscida cohaerentia. Ovarium sulcatum. Capsula oblongo-obovata, triquetra, subincurva, purpurea. Habitat in sylvis prope Berlijn, ad rivum Para, supra arbores. Florebat Junio, Julio, Octobri et Novembri.

Obs. Cl. Lindley habet pro Pl. articulari. Ego non credo. Illius folium orbiculare, hujus ovatum acutum. Hujus sepala oblonga, illius acuminata. Hujus labellum apicem usque serrulatum, illius in medio tantum. Hujus vaginae acutae, illius lepanthinae.

Obs. Nuper ill. Lindley in foliis VIII. novum proposuit ordinem, quem hic juvat addere, licet assentiri non omnino possim.

1. There is a group of species with great coriaceous leaves, long herbaceous spathes, and numerous racemes of fleshy flowers, rising above the leaves. These are the aristocracy of the genus, although some approach very nearly the mean genus Stelis; they form my *Spathaceae*.
2. Many others there are, conspicuous for their large leathery leaves, usually heart-shaped, pouring forth great membranous flowers in racemes, or usually smaller ones in clusters, all without conspicuous spathes; such form the *Macrophyllae racemosae* (Acronias of Presl), *Macrophyllae fasciculatae*.
3. Then come large leaved plants with winged stalks, sometimes resembling a thin stiletto, and fasciculate small flowers. These are *Sicariae*.
4. Immediately follows a crowd, many of which resemble Octomerias, all with fasciculate flowers and leaves tapering to the base: to these is applied the name of *Aggregatae*.
5. Much like the last is a little group with the points of the petals distended into a gland, offering a passage to the genus Restrepia, of which they are kinsmen; whence they are called *Restrepioideae*.
6. Close to Aggregatae, but with the inflorescence developed into a raceme, stands a herd, none of which are able to extend it beyond the summit of the leaves; hence the name of *Brachystachyae*.
7. Then the development of the floral axis is manifested by long racemes of flowers rising high above the leaves, as in *Elongatae*.
8. And parallel with these are other species in which the lengthened axis is accompanied by a well marked attenuation of the sepals: the *Acuminatae*.
9. Having considerable relation to the last division, but with little or no development of the stem, appear the *Apodae* or species in which the stem, if present, is much shorter than the leaves; and of them some form dense tufts: the *Apodae caespitosae* while others crawl upon the ground: the *Apodae prorepentes*.
10. Finally, a very small number of species casts off the character of a creeping or shortened rhizome producing erect one-leaved stems, and form an ordinary stem with leaves alternating with each other in the usual way. These, the *Caulescentes*, close the genus. The parallel of these is to be found among the Labiated Stelises.

MUSCOSAE.

74. PLEUROTHALLIS CHAMAELEPANTHES Rchb. fil. in Bonpl. III. 240: aff. forsan Pl. pusillae Lindl. vaginis arctis secus nervos ciliatis, ostio libero triangulo ciliato, folio oblongo marginato apice emarginato seu acuto basi petiolari cuneato, pedunculo capillari, sepalo utroque lanceo subulato, inferiori bifido, margine minute scabro, tepalis ligulatis brevissimis, labello basi trilobo, gynostemio gracili. Planta tenella, Lepanthides racemifloras simulans. Caulis secundarius tenuis, tri-, quadrivaginatus vix bipollicaris. Folium pergameneum vix semipollicare, vix quartam pollicis latum. Pedunculus capillaris folio longior. Bracteae triangulae ciliatae minutae. Perigonium hyalinum flavidum. Labelli basi trilobi lobi laterales acinaciformes valde abbreviati, lobus medius ligulatus productus. Gynostemium utrinque pone foveam lobulatum. Nunc caulis tertianus axillaris in axillis folii! Capsula glabra oblonga. Valley of Lloa, on trees. 313. Jamieson.

75. PLEUROTHALLIS UNIFLORA Lindl. Comp. B. M. II. 355. Huc referenda: Pl. striata Focke in Tijdsch. f. Wiss. u. Naturst. IV. 63: foliis ovali-oblongis utrinque attenuatis caule triplo longioribus, pedunculis unifloris erectis, sepalis patulis, lateralibus connatis apice tantum liberis basi gibbosis, petalis dimidio minoribus ovatis acutis inaequilateris integris, labello linguaeformi utroque margine in lobum acutum dilatato integro apice rotundato, floribus vitellinis aurantiaco striatis. — Radices filiformes, albescentes. Caulis monophyllus, folio triplo brevior, vestitus. Bracteae marcescentes. Folium ovali-oblongum, vel late lanceolatum utrinque attenuatum, coriaceum,

strictum, planum, in caulem processu petioliformi conduplicatum decurrens, cum caule articulatum. Pedunculus solitarius, filiformis, ad medium articulatus, ibique vagina fuscescenti instructus, erectus, uniflorus, ad caulis basin ortus, 4 centim. longus. Sepala oblonga, acuta, patula; lateralia in unum connata, apice fissa, basi gibbosa, vitellina omnia, striis elevatis aurantiacis picta. Petala dimidio minora, ovata, acuta, integra, inaequilatera, basi obliqua, sepalis concolora, uninervia, nervo aurantiaco, latere majori stria aurantiaca picta, conniventia. Labellum linguiforme petalis aequale, concavum, integrum, cum basi producta columnae articulatum, unguiculatum, subhastatum, lobis scilicet lateralibus acutis, conniventibus, apice rotundato incurvo, aurantiacum. Columna labello vix brevior, arcuata, cum labelli unguiculo articulata, viridis, aurantiaco-marginata, clinandrio tridentato. Anthera unilocularis, cristata, albida, clinandrio immersa. Pollinia duo pyriformia, compressa, incumbentia, lutea. Ovarium teres trisulcatum, cum pedicello geniculato-articulatum. Epiphyta in sylvis ad flumen Boven-Commewyne. Floret Martio et Aprili. Flores vix 5 millim. longi.

76. PLEUROTHALLIS SEMPERFLORENS Lindl. Fol. IX. n. 248. Huc: Pl. acuminata Focke in Tidsch. voor de Wis-nat. Wetsch. II. 3. Af. 1849 p. 195. Nat. Vdl. van de Holl. Maatsch. Haarl. VII. Ser. Select. 1851. 215 cum ic. Tf. LXIV: foliis oblongis ovalibusque emarginatis in caulem brevem sensim attenuatis, junioribus discoloribus, sepalis oblongis subito et longe acuminatis, acumine lineari obtusiusculo trinervibus concavis, lateralibus basi connatis, petalis dimidio minoribus ovatis inaequaliter serratis uninervibus, labello oblongo hastato unguiculato, obtusissimo, disco velutino, lobis lateralibus conniventibus. Epiphyta, pusilla, caespitosa. Radices filiformes albidae. Caulis brevis, tenuis, monophyllus. Folium oblongum v. ovale, obtusum, emarginatum, in caulem sensim attenuatum, planum, junius purpurascens, subtus pallide purpureum; cum caule 1 — 1,5 centim. longum, 0,5 centim. latum. Pedunculus solitariis, capillaris, nudus erectus, folio multum longior, uni (vel raro pauciflorus, ad basin folii ortus. Perianthium patulum. Sepala oblonga, subito et longe acuminata (acumine lineari, obtusiusculo, patulo, demum recurvo) trinervia, (nervo medio subtus prominente, lateralibus apicem versus evanescentibus) concava; lateralia basi connata, anguloso plicata, acuta, plana, inaequaliter serrata, vel sparsa lacerato-ciliata, uninervia. Labellum oblongum, hastatum, purpureo unguiculatum, obtusissimum, subcarnosum; lobis lateralibus rotundatis, incurvis, apice recurvo, lamina interiore granuloso velutina. Columna labello brevior, arcuata cum labelli unguiculo articulata, clinandrio tridentato, dentibus antheram excedentibus; lateralibus majoribus. Anthera 1 locularis, cristata albida. Poll. 2, dimidiata, plano convexa, incumbentia, apice materie pulverea cohaerentia. Ovarium sulcatum, cum pedunculo articulatum, purpureum 1,5 mm. longum. — Flores sordide lutei. In Surinami sylvis ad ripas fluminis Commewyne superioris. Toto anno.

Obs. P. aristatae Hook affinis.

77. PLEUROTHALLIS BARBULATA Lindl. Fol. IX. Huc: Pl. barbata Focke in Schldl. B. Z. 1853. 227: foliis obovatis obtusis crassiusculis in caulem brevem attenuatis, scapo paucifloro foliis breviore, sepalis reflexis, lateralibus connatis apice tantum liberis, supremo oblongo concavo, petalis vix brevibus ovatis attenuatis integris erectis, labello linguaeformi oscillante marginato et apice laminae exterioris pilis densis longiusculis barbatus. Epiphyta, pusilla, caespitosa, habitu Pl. acuminatae. Radices griseae. Caulis brevis, monophyllus. Folia obovata, adultiora oblonga, obtusa, crassiuscula, in caule attenuato. Scapus lateralis, racemosus, pauciflorus, foliis brevior. Sepala reflexa, lat. connata, apice tantum libera, basi sub labelli ungue gibbosa, purpurea, supremum oblongum, acutum, concavum, flavum. Petala sepalis subaequilonga, ovata basi subobliqua, sensim attenuata, erecta, integra, flava. Labellum linguaeforme seu lineari-oblongum obtusum, basi hastatum, oscillans, cum corolla parallelum, cumque ejus pede producto ungue brevissime articulatum, convexum, duabus lamellis longitudinalibus parallelis vitellinis totum discum obtegentibus, margi-

nibus et apice laminae anterioris purpureae, pilis densis diaphanis albis longiusculis barbatum. Columna petalis subaequalis, leviter arcuata membranaceo marginata, utrinque dente postico, apiculo bidentato terminali. Anthera globosa, clinandrio immersa. Ovarium triquetrum, trisulcatum, purpureum. — Hab. in Surinami sylvis. Junio.

78. PLEUROTHALLIS OVALIFOLIA Rchb. fil. Mss. Hoc: Stelis ovalifolia Focke Tidsch. vor d. Wis. Nat. Wetsch. II. 1849. p. 202: folio ovali-subcarnoso, pedunculo solitario 1—2 floro, filiformi folium vix superante, sepalis ovatis acutis, petalis lineari-lanceolatis acutis recurvis, labello petaloideo ovato acuto sepalis breviore. Herba epiphyta pusilla acaulis, caespitosa. Rhizoma filiforme, repens. Folium ovale, petiolatum, in petiolum attenuatum, acutiusculum, planum, subcarnosum, nitidum, 7—8 mm. longum, 4 mm. latum. Pedunculus solitarius, uni — vel biflorus axillaris, filiformis folio vix longior. Flores minutissimi sordide flavescentes, diaphani. Perianthium patens. Sepala libera, ovata, acuta, lateralia paululum approximata. Petala angustiora, lineari-lanceolata, acuta, recurva, sepalis subaequalia. Labellum petaloideum, ovatum, acutum, anticum, sepalis brevius. Columna nana, cum ovario sulcato continua carnosa. Pollinia subcarnosa, distincta, flavida. Anthera opercularis, unilocularis, late cordata. Capsula triangularis, oblongo-ovata, in pedunculum attenuata, cumque eo articulata. — Surinam ad truncos arborum inter muscos, non rara. Decb., Martio ad Junium.

Obs. Cf. Lindley novas monographias: in fine Stelidis legis: Stelis ovalifolia Focke = Pleurothallis. In fine Pleurothallidis legis: Pl. ovalifolia Focke = Stelis.

1316/a. PHYSOSIPHON *Lindl.*

B. R. sub tab. 1797.

1. PHYSOSIPHON TUBATUS Rchb. fil. Mss.: Physosiphon Loddigesii Lindl. l. c. Bot. Mag. 4869. Folio oblongo obtuso, racemo solitario multo breviore, calycis tubo triquetro, labelli lobo medio serrulato scabriusculo. Stelis tubata Lodd. B. Cab. 1607. „Under the name of Stelis tubata, says Dr. Lindley l. c. Mss. Loddiges have published a very curious plant, with the habit of Pleurothallis but with it sepals all united into a tube, which is inflated at the base and contracted at the mouth. Otherwise its fructification has the structure of Stelis." Besides the present species, Dr. Lindley includes in the genus

Physos. emarginatus (Pl. — Lindl.).
— *spiralis* (in hb. Hook. St. Catherine Brazil).
— *carinatus* Lindl. (a species very near the present).
— *ochraceus* Rich. Gal. (probably not distinct from this)

and he has since expressed the opinion, that Ppp. and Endlichers Specklinia dichotoma is a fourth species. — Klotzsch. Allg. Gz. 1850. p. 122.

Obs. Ill. Hooker iconis ab ipso editae: Ic. VI. 1843. tab. 508. non fecit mentionem.

1319/1. MASDEVALLIA *Rz. Pav.*

(Prod. Peruv. 122. t. 27. — Walp. Ann. III. p. 523.)

— Typus *Masdevalliae triangularis* Lindl. —

1. MASDEVALLIA TRIANGULARIS Lindl. — Rchb. fil. Bonpl. II. 23. Caracas. Wagener.

2. MASDEVALLIA WAGENERIANA Lindn. in Paxt. Fl. G. III. p. 72. c. xyl.: uniflorae, folio obovato-oblongo rotundato in petiolum attenuato, scapo foliis aequali angulato, sepalis ovatis erectis aequalibus in setam longum extensis, petalis truncatis subcarnosis apice tridentatis, margine anteriori in plicam producto, labello rhombeo serrulato apice calloso inflexo. — (M. coccinea has large flowers as scarlet as a soldiers jacket.) — Lindl. Paxt. III. p. 74. c. xyl. Rchb. fil. Bonpl. II. 23. Icon in Paxton in eo peccat, quod flos ibi clausus, dum vivus aperitur.

3. MASDEVALLIA HYMENANTHA Rchb. fil. in Bonpl. III. 224: aff. triangulari Lindl. sepalis latioribus, brevius (per pollicem) setaceis, tepalis ligulatis apice bidentatis, basi antica in dentem assurgentem brevem productis, labello ligulato apice incrassato. Petiolus basi nigratus. Folium quatuor pollices longum, per dimidium in petiolum angustum, constrictum, superne cuneato oblongum apice contractum. Pedunculus quadripollicaris. Bractea arcta apiculata pedicello brevior. Perigonium hymenodes. Cupula a basi infundibulari explanata in lacinias ternas triangulas aequales. Peru. Chachapoyas. Matthews (Herb. ill. Boiss.) (In eodem herbario adest rarissima. M. constricta Poepp. Endl. a Matthews lecta, cujus flos in ipso Poeppigiano herbario desideratur!!!)

4. MASDEVALLIA CAUDATA Lindley. Rchb. fil. Bonpl. II. 23. Plantula perelegans. Sepala profunde fissa, ovalia, viridia, fasciis interruptis violaceis. Apices aristati violacei duplo longiores. Caracas. 6000'. Julio. Wagener.

5. MASDEVALLIA ARMINII Lind. et Rchb. fil. Bonpl. II. 283; valde aff. M. Wagenerianae Linden.: tepalis ligulatis curvulis apice obtuse tridentatis, margine inferiori bicarinatis, supra basin semihastatis, labello pandurato apicis ob apiculum inflexum retuso. androclinii cucullo trilobo retuso. — Plantula ex elegantissimis! Caules secundarii brevissimi atrati. Folii petiolus duas tertias pollicis longus, tenuis. Lamina pollicaris, nunc sesquipollicaris, imo ultra bipollicaris, cuneato oblonga, apice acuta, medio usque ultra pollicem latum. Pedunculus tenuis usque quadripollicaris. Perigonium membranaceum tenuissimum. Sepala basi coalita per duas lineas, dein semiovata per quaternas—quinas lineas, abrupte in setas bipollicares extensa. — Perigonium bene roseum, apicibus purpureis. Amiciss Wagener dicata. Ocanna. Nr. 740. Nr. 1182. Schlim. — Bonpl. III. 69. Flores valde tenues rosei maculis purpureis. 9000'. Januar. 1849. Wagener.

— Typus *Masdevalliae pumilae* Endl. Poepp. —

6. MASDEVALLIA HIANS Lind., Rchb. fil. in Bonpl. II. 283: aff. M. pumilae Pöpp. (= tubulosae Lindl.?) cupula ampliori, triangulo supremo breviori quam triangula lateralia, omnibus abrupte in setas carnosulas productis, tepalis ligulatis, supra basin antice semihastatis, labelli ligulatooblongi limbo replicato usque ante apicem, ibi abrupte expanso denticulato, ante apicem calloso. — Planta tenuissima. Folia lineari-lanceolata, bi—tripollicaria. Pedunculus capillaris. Bractea convoluta retusa pedicello multo brevior. Flos illi M. minutae duplo amplior, vix longior. — Gynostemium clavatum apice integrum. — Blüthen gelb. Ocanna: Wälder. 8000'. Nr. 1163. Schlim. — Bonpl. III. 69. 6000'. März. Wagener.

7. MASDEVALLIA MINUTA Lindl. Ann. nat. hist. XII. 1843. p. 396. Huc: Masdevallia surinamensis Focke in Tijdschrift voor de Naturw. IV. 62: foliis elongato spatulatis emarginatis apice recurvis scapo unifloro dimidio circiter brevioribus, floribus albis, sepalis in tubum campanulatum basi hinc gibbosum ad medium usque connatis, apice tridentatis, margine antico unidentato. — Herba epiphyta caespitosa Pleurothallidis habitu. Radices filiformes griseae. Folium elongato-spathulatum emarginatum, apice recurvum, in petiolum radicalum attenuatum, rigidum, nitidum, laete viride, 4 centim. longum. Scapus radicalis uniflorus cum pedicello articulatus, filiformis, erectus, ebracteatus, cum flore 6—8 centim. longus. Sepala in tubum campanulatum subtriquetrum basi hinc gibbosum ad dimidium usque connata, apice libera, patentia, attenuata. Petala sepalis quadruplo minora, spathulata, oblonga, uninervia, apice tridentata, hinc margine (qui ad labellum spectat) unidentata. Labellum linguaeforme, obtusum, recurvum, petalis aeque longum, basi cordatum paullo dilatatum, cum pede columnae in rostellum producto unguiculato-articulatum, marginibus revolutis, limbi apice luteo. Columna cum labello parallela, cum ovario continua, marginata, canaliculata, clinandrii dorso antheram superante. Anthera opercularis, unilocularis, basi semilunaris, concolor. Pollinia duo pyriformia, plano-convexa, conniventia, apice materie pulverea sub lente granulosa cohaerentia, flavida. Ovarium sulcatum,

brevissimum, cum pedicello vagina arcta tenui ac diaphana vestito (interdum geniculo) articulatum. Capsula oblongo-obovata, subincurva, sexsulcata. Flores albi odorati. Florebat Aprili in arborum vetustorum truncis ad flumen Suriname.

8. MASDEVALLIA PUMILA Pöpp. Endl. Rchb. fil. in Bonpl. III. 69: aff. minutae Lindl. cupula cylindracea haud ampla, caudis linearibus aequilongis, triangulo superiori abbreviato minuto, triangulis lateralibus magis productis; tepalis ligulatis obtusis supra basin anticam semisagittatis; labello pandurato ligulato obtuse acuto; androclinii cucullo minute denticulato. Folia lineari-lancea apice inaequali bidentata, basi valde attenuata incluso caule secundario quadripollicari. Sepalorum triangula sensim nec abrupte in caudas attenuata. Cuchero. Pöppig.

— Typus *Masdevalliae melanoxanthae* Rchb. fil. —

9. MASDEVALLIA MACULATA Kl. Krst. Rchb. fil. Bonpl. II. 23. Es liegen verschiedene getrocknete Exemplare und drei Abbildungen vor. Die Abbildungen haben den Blüthenstiel länger, gleichlang, kürzer als das Blatt und sind die Blüthen ganz gelb; gelbgrün mit rothem Fleck auf Grund der seitlichen Sepala; und ganz purpurn. Caracas. Juni. August. Wagener.

10. MASDEVALLIA MELANOXANTHA Lind., Rchb. fil. in Bonpl. II. 283: nulli proprius affinis, pedunculo ancipiti pedali, bracteis vaginatis acutis appressis, floribus heterochronicis, cupula brevissima, triangulo superiori sensim attenuato, inferiori ligulato apice bifido, tota superficie aspera, tepalis ligulatis apiculatis, supra basin anticam obtuse semihastatis, labelli portione postica cordata lineari, duobus lobulis obtusis impositis in portione antica ovali acuta parte antica papulosa. — Folium a basi lineari petioliformi oblongospatulatum apice obtuse acutum. Perigonii hiantis subcarnosi labium superius aureum, inferius atroviolaceum. — Ocanna. 5000'. Juni. Nr. 1166. Schlim. — Rchb. fil. in Bonpl. III. 69. Wagener.

— Typus *Masdevalliae coriaceae* Lindl. —

11. MASDEVALLIA CAYENNENSIS Rchb. fil. in Otto et Dietr. Allg. Gtz. 1855. p. 242. Aff. quodammodo M. coriaceae quadruplo minor, cupula brevi ampla, triangulo superiori statim in processum linearem producto, triangulis inferioribus connatis semiovatis apice tantum exciso-bidentatis. — Folium spathulatum tri- quadripollicare. Pedunculus aequalis. Bractea convoluta apice retuso-apiculata. Tepala ligulata acuta supra basin utrinque angulata, margine anteriori carinata. Labellum ligulatum acutum portione posteriori carinis geminis incurrentibus transeunte in partem anticam ovatam acutam minutam denticulatam, papulis quibusdam in disco. — Gynostemium clavatum vertice membrana denticulata marginatum. — Cauda supremi labii inferioribus longior. Perigonium cupreoflavum.

12. MASDEVALLIA AMANDA Rchb. fil. et Warszew. in Bonpl. II. 115: nulli affinis, racemis bi—trifloris, ovariis tripteris, sepalo summo galeato maximo; tepalis tridentatis; labello trilobo. Folia bipollicaria, 3—4 lineas lata lineariligulata acuta, basi valde lineari-attenuata, pedunculo gracili, bi—trifloro breviora; pedunculi ima basi univaginati; apice racemosi; bracteae cucullatae, apiculatae hyalinae ovario pedicellato triptero dimidio breviores-aequales; cupula amplissima mento magno, imo conice extruso, postice bicarinato; labium superius maximum, galeatum, margine inferiori serrulatum carinatum, dimidio antico lineariflliforme; labium inferius bifidum, laciniis triangulo setaceis; tepala hyalina, cuneato ligulata, margine serrulata; apice tridentata dente medio porrecto; trinervia; carinis serrulatis supra nervos; labellum ligulatum, trilobum, medio immersum, lobis lateralibus rectangulis, lobo medio ligulato exserto; tricarinatum; gynostemium gracile androclinio membranaceo marginato denticulato; rostellum productum retusum. Flos valde amabilis. Perigonium siccum flavum maculis multis violaceis, haud majus, quam illud M. floribundae. Plantae huc usque notae racemosae typi sunt M. racemosae et Schlimii. Nov. Granat. Warscewicz. — Bonpl. II. 233: flores albi maculis roseis. Ocanna. 6—7000'. In sylvis. Martio. Nr. 503. Schlim.

13. MASDEVALLIA LAEVIS Lindl. Rchb. fil. in Bonpl. III. 69: aff. ensatae Rchb. fil. cupula brevissima ante basin constricta, labello obovato basi complicato, sulcato, ante apicem utrinque constricto, lineis tribus elevatulis in disco; sepalis inferioribus intus sericeo velutinis. Folia oblonga spatulata acuta valde coriacea, tres pollices longa, unum lata. Pedunculus folio subduplo brevior. Bractea retusa pedicello brevior. Cupula brevis. Triangula subaequalia, lateralia profunde bifida. Tepala obliqua apice retuso tridentata; dentibus lateralibus obtusis; supra basin semisagittata, limbo anteriori bicarinato. Gynostemium gracile; androclinii cucullus serratus. Papillae sericeae intus in perigonio et limbi papillosi. Flos flavidus maculis purpureis.

14. MASDEVALLIA LEPIDA Rchb. fil. in Bonpl. III. 69: aff. M. affini, duplo minor, folio ovali, triangulo superiori abbreviato. Plantulae caulis vaginis hyalinis retusis vestitus. Folium ovale acutum in petiolum aequalem attenuatum. Pedunculus gracilis subaequilongus. Bractea convoluta retusa pedicello prope duplo brevior. Tepala ligulata acuta supra basin anticam breviter ac obtuse semisagittata. Labellum ligulatum supra basin involutum. Gynostemium gracile. Androclinium minute denticulatum. Flos flavus et brunneus. 8000'. März. Ocanna. Wagener.

15. MASDEVALLIA AFFINIS Lindl. Rchb. fil. in Bonpl. III. 69: aff. lepidae Rchb. fil. folio oblongo, acuto, perigonii triangulis setisque aequalibus. Folium petiolato oblongum acutum, quinque- ad sexpollicare. Pedunculus subaequalis. Bractea retusa pedicello aequalis. Perigonium sesquipollicare. Mentum rectangulum. Cupula ampla. Tepala ligulata supra basin anticam semisagittata, apice tridentata, dentibus lateralibus obtusis. Labellum a basi cordata ligulatum, apice obtuse acutum. Gynostemium gracile. Androclinium denticulatum. Neu-Granada. 1278. Linden. — Rchb. fil. Bonpl. II. 23. Caracas. 5—6000'. März, April. Wagener.

16. MASDEVALLIA CIVILIS Rchb. fil. et Warszew. in Bonpl. II. 115: aff. M. coriaceae sepalis longius et multo tenuius attenuatis, mento arctiore, tepalis medio hastatis, labello utrinque carinato. Folia lineariligulata acuta basi valde attenuata. Pedunculus plurivaginatus, 2—3 pollicaris. Bractea ochreata, ampla, ovario pedicellato brevior. Perigonium coriaceum, mentum productum, bene angulatum; tubus amplus; medio subconstrictus, labium superius triangulum, per duas tertias linearisetaceum; labium inferius sub sinu divisionis angulatum, in duas partes labio superiori aequales, paulo latiores bilobum; tepala incurva, ligulata, acuta, utrinque rectangulata (hinc hastata). labellum ligulatum acutum; utroque margine a regione antebasilari apicem versus carinatum; androclinii cucullus lineariligulatus. Flos extus brunneus maculis rufis, intus flavus, eadem arte punctatus. Peru. v. Warscewicz.

17. MASDEVALLIA LEONTOGLOSSA Rchb. fil. in Bonpl. III. 69: aff. M. coriaceae Lindl. cupula breviori, tepalis lato-ligulatis acutis medio inferiori angulatis, labello basi lato-cuneato dein lato-linguiformi acuto, ansis carinatis duabus in basi, limbo postico denticulato, superficie praesertim anteriori dense papulis asperula. Flos paulo major, quam ille M. coriaceae, purpureo-violaceus fuisse visus.

18. MASDEVALLIA ENSATA Rchb. fil. in Linn. in Bonpl. II. 283: aff. affini Lindl.: folio ovali, cupula ante basin constricta, triangulo supremo lateralibus duplo minori, labello oblongo marginibus et apice acutiusculo revolutis. — Caulis secundarius dense vaginatus. Lamina petiolo suo brevior. Pedunculus elongatus supra basin univaginatus. Bractea retusa pedicello brevior. Perigonium flavobrunneum atropurpureo nervosum. Setae laterales crenato deflexae. Tepala ligulata apice inaequaliter tridentata dentibus lateralibus obtusis, basi antica semisagittata. Gynostemium gracile vix marginatum. Androclinii cucullus posticus denticulatus. Ocanna. 8—10000'. Juli. Nr. 731. Schlim.

19. MASDEVALLIA BONPLANDI Rchb. fil. in Bonpl. III. 69: aff. M. coriaceae cupula breviori tepalis oblongo-ligulatis acutis antice bicarinatis, carina interiori supra basin angulato praerupta, labello oblongo ante medium leviter trilobulo, ansis duabus in basi, carinis 2 in medio, angulis papulisque plurimis in portione anteriori, gynostemii androclinio minute denticulato. „Masdevallia uniflora Ruiz. Pav." Hb. B. Kth.; Folium spathulatum angustum pedunculo subduplo brevius. Flos M. coriaceae major.

20. MASDEVALLIA ELEPHANTICEPS Rchb. fil. et Warscew. in Bonpl. II. 116; aff. coriaceae et laevi, quater—sexies major, dorso carinato, tepalis ligulatis acutis uninerviis, labello rhombeo ligulato, basi bicarinulato, dimidio antico papulis acutis asperrimo. „Folium cuneato obovatum acutum". Pedunculus validus teretiusculus parce vaginatus. Bractea membranacea acuta ovario pedicellato multo—dimidio brevior. Tubus amplissimus, subcoriaceus, bilabiatus; labium superius a basi triangula lineariligulatum; labium inferius longe coalitum; subito sinuato bifidum in duas lacinias superiori aequales, dificiente basi triangula elongata; tepala ligulata acuta uninervia; labellum rhombeoligulatum, basi bicarinatum, antrorsum papulis acutis asperrimum; gynostemium incurvum; androclinium membranaceo marginatum, denticulatum. Flos flavus et purpureus, maximus generis. Neu-Granada. — Bonpl. III. 69. 1000'. April. Wagener. — Bonpl. II. 233. — Rchb. fil. Xenia tab. 6, var. pachysepala: sepalorum setis latioribus. Ocanna. 7—8000' Wälder. Nr. 410. Schlim. Van Houtte Fl. d. S. X. 997.

— Typus *Masdevalliae tovarensis* Rchb. fil. —

21. MASDEVALLIA AUROPURPREA Rchb. fil. et Warscew. in Bonpl. II. 115: nulli affinis — baud ita remota a M. Schlimii pedunculo alato bifloro, cupula brevissima subnulla, sepalo summo angustissimo, sepalis lateralibus in laminam ovalem apice bicaudatam coalitis. Folium coriaceum oblongum apice rotundatum, dimidio inferiori cuneato lineare; trinerve; 4—5 pollicare; pedunculus ancipiti alatus 5—6 pollicaris, alis in carinas bractearum ascendentibus; flores valde approximati; ovaria pedicellata bracteis duplo longiora; cupula angusta brevissima minuta; sepalum superius lineari-triangulum, longe setaceum; sepalum inferius late ellipticum, apice sinuato bilobum; lobi trianguli brevissimi longe setacei; tepala basi anguste ligulata uniauriculata dein dilatata obtuse acuta; labellum brevissime unguiculatum ligulatum acutiusculum, limbo basin versus reflexo, cariais 2 marginalibus in laminam tertio antico intrantibus; gynostemium clavatum, androclinii limbus erectus denticulatus; regio pone foveam anguste alata. Flores illis M. affinis aequimagni, sicci nigri apicibus flavis. Neu-Granada. Warscew. — Bonpl. III. 69. 5000'. Wagener. — In Bonpl. II. 288. Ocanna. 6000'. Nr. 40. Schlim.

22. MASDEVALLIA TOVARENSIS: Rchb. fil. in Bonpl. III. h. 24 huc reduxit nomen M. candidae Klotzsch Karsten, quod videtur Mss. in hort. — Rchb. fil. Bonpl II. 23: Caracas. 6000'. November. Wagener.

— Typus *Masdevalliae coccineae* Lind. —

23. MASDEVALLIA ROSEA Lindl. Annal. Nat. Hist. XV. 257. Rchb. fil. in Bonpl. II. 116: folium coriaceum oblongum acutum a basi cuneata in portionem petiolarem subaequilongam attenuatum, nervis 5 prominulis, 6 pollices longum, 1¼ in media lamina latum; pedunculus gracilis uniflorus, bractea arcta oblonga acuta scariosa ovarii pedicellati dimidium aequans; perigonium externum (2—3 pollices longum) ultra dimidium aequaliter tubulosum mento rectangulo parvo, dein bilabiatum; superius liberum a basi anguste triangula brevi setaceum labio inferiori brevius; labium inferius extrorse utrinque rotundatum, ad medium usque bilobum sinu triangulo interjecto, lobus uterque oblique triangulus in setam subaequilongam abrupte angustatus; tepala a latiori basi angustata, ligulatofalcata, retusa, uninervia, bilinearia; labellum aequilongum pandurato ligulatum, quinquenerve imo apice trilobum, lobi laterales rectanguli minuti; lobus medius crassus, asperulus, limbo denticulatus, minutus, tamen porrectus, reflexus; gynostemium semiteres, dorso bene carinatum, androclinii margo posticus elevatus, ligulatus, retusus; rostellum ligulatum, retusum, convexum, porrectum; anthera conica, utrinque antice auricula dependente ligulata retusa aucta!!! (quod adeo nunquam videram!) Perigonium pulcherrime roseum. Loxa. (Hartweg.)

24. MASDEVALLIA COCCINEA Linden (Orch. Linden. p. 5) Rchb. fil. in Bonpl. II. 115: folium coriaceum trinerve oblongum obtusatum (cum apiculo) anguste cuneatum, trinerve, cum parte petiolari teretiuscula canaliculata articulatum; in caule secundario brevissimo; pedunculus ultra pedalis, ovarium pedicello suo quadruplo brevius; bractea

vaginans acuta ovario pedicellato duplo brevior; perigonium externum mento vix prominulo in tubulum curvum 4—6 linearem coalitum, dein bilabiatum; labium superius triangulum per quinque sextas linearisubulatum; labium inferius ellipticum, dilatatum, maximum, ab apice medium usque sinu triangulo angusto bilobum, lobo utroque falcato triangulo introrso apice valde angustato; tepala ligulata, apice obtusato emarginata 2—3 linearia uninervia; labellum ligulatum, apice dilatatum, utrinque rotundatum, medio retuso lateque apiculatum; gynostemium utroque angulo marginatum, androclinium elevato cucullatum, cucullo retuso denticulato. — Rchb. fil. Bonpl. II. 283. Ocanna. Wälder. 8—10000′. Mai. Nr. 1164. Schlim.

25. MASDEVALLIA AMABILIS Rchb. fil. et Wrsw. in Bonpl. II. 116: similis M. roseae triplo minor, tubulo medium versus ampliato, tepalis apiculatis binerviis, labello apiculato, gynostemio alato, anthera antice emarginata. Folium cuneato oblongum obtusum tripollicare, ¾ pollices supra medium latum. Pedunculus tenuis. Bractea arctissime vaginans acuta ovario pedicellato plus duplo brevior. Perigonium externum medium usque tubulosum, tubulo superne ampliato mento obtuse rectangulo parvo; superne bilabiatum; labium superius lato triangulum per duas tertias subulatolineare; labium inferius duplo latius, externe rotundatum, sinu interjecto triangulo bilobum, lobi oblique trianguli per tres quartas seu duas tertias linearisubulato lineares; tepala a lata basi angustata, ligulata, apice sinuata, altero lobo obtuso, altero apiculato (nunc utroque obtuso), binervia, nervo altero carinato; labellum breve unguiculatum, lamina linearligulata apice dilatata, acuta; carinulae 2 per medium in sicca bene conspiciendae; in planta humefacta evanescentes; gynostemium semiteres, lateribus alatomarginatum, androclinii cucullo hyalino denticulato. Pulchre purpurea. Peru. Warszewicz.

26. MASDEVALLIA MILITARIS Rchb. fil. et Wrsw. in Bonpl. II. 115: aff. coccineae tepalis inaequalibus binerviis, labello apice dilatato integro. „Folia oblonga acuta basin versus anguste cuneata. Pedunculus validus folio suo vulgo dimidio longior, violaceus". Perigonii tubulus incurvus septemlinearis mento omnino obtusato evanescente; dein bilabiatus; labium superius a basi angustissima triangula linearisetaceum; sesquipollicare; labium inferius latissimum medium usque bilobum, lobi trianguli utrinque obtusati, apiculati; tepala ligulata, binervia, altero latere rectilinea, altero lobulata; 3—5-linearia; labellum ligulatum apice dilatatum, obtusatum integrum; androclinium margine cucullatum. Flores duabus tertiis illorum M. coccineae aequimagni, sicci cinnabarini, vivi scarlatini. Neu-Granada. Wrsw. — Bonpl. II. 283. Ocanna. Wälder. 9—11000′. Januar. Nr. 415. Schlim.

27. MASDEVALLIA RACEMOSA Lindl. Rchb. fil. in Bonpl. III. 69: affinis M. coccineae cupula elongata, sepalorum triangulo summo minuto apiculato triangulis lateralibus semiovatis alte connatis extrorsis apiculatis. Folia basi linearia subito ovalia acuta. Racemus plurifiorus folio longior. Triangula inferiora cupulae aequalia. Tepala ligulata acuta supra basin anticam angulata. Labellum ligulatum; portio basilaris carinis duabus transiens in anticam breviorem rhombeam apice emarginatam. Gynostemium clavatum, androclinii cucullus minute denticulatus. Hartweg 1432.

— Typus *Masdevalliae polyanthae* Lindl. —

28. MASDEVALLIA POLYANTHA Lindl. Rchb. fil. in Bonpl. II. 285: affinis M. Schlimii Lind. et Sceptro Lind., Rchb. fil: pedunculo ancipiti anguste alato, polyantho, floribus duplo minoribus, cupula brevissima recta, sepalis ceterum aequalibus, tepalis ligulatis acutis obliquis, labello ligulato apice apiculato reflexo, lateribus revoluto, basi cordato; carina e basi in discum, lamellis duabus triangulis antepositis, androclinii cucullo denticulato. — Folium a cuneata basi ligulatum acutum, dum in M. Schlimii Lind. spathulato oblongum. — Flores purpurei, apicibus aureis. Ocanna: Wälder. Februar. 7—8000′. Schlim. — Bonpl. III. 69. April. 6000′. Wagener.

29. MASDEVALLIA BUCCINATOR Rchb. fil. et Wrsw. in Bonpl. II. 115: aff. M. Schlimii pedunculo alato, bifloro, perigonio breviori, cupula coalita longiore, labio inferiori

incurvo deflexo buccinato, apiculo interjecto in sinu. Folium valde coriaceum oblongoligulatum acutum trinerve tertio inferiori cuneato lineare subpedale. Pedunculus anceps utrinque alatus; biflorus, internodio brevissimo. Bracteae cucullatae acutiusculae scariosae amplae ovariis pedicellatis in articulatione angulatis breviores. Perigonia coriacea (firmiora quam in M. Schlimii); cupulae quinquelineares amplae mento bene angulato; labium superius a basi triangula brevissima lineariligulatum; labium inferius latissimum, cucullatum, subito et sub angulo deflexum, marginibus extrorsis erectis curvatis; apice apiculo in sinu parvo interjecto bicaudatum, caudis lineariligulatis; tepala ligulata acuta uninervia hinc angulata; labellum lineariligulatum acuminatum, asperulum carinis 2 a basi in discum, ibi abrupte angulatis; gynostemio marginato, androclinio denticulato cucullato. Flores purpurei, tertia breviores, quam illi M. Schlimii. Neu-Granada. Wrsw. — Wrwz. in Bonpl. II. 283. Perigonia flava seu purpurea. — Pamplona; la Baja. Januar. 8000'. Nr. 1181. Schlim.

30. MASDEVALLIA CINNAMOMEA Rchb. fil. in Bonpl. III. 221: affinis M. Schlimii pedunculo tenui haud adeo ancipiti, sepalis inferioribus alte bipartitis, tepalis ligulatis apiculatis, supra basin utrinque angulatis, latere inferiori carinatis, labelli hypochilio ligulato apice abrupto utrinque angulato cariuae instar in lobum medium rhombeum apiculatum serrulatum transeunte, tumore hippocrepico retrorso in disco, androclinii cucullo subnullo denticulato. Spithamaea. Caulis secundarius brevis vaginis retusis sat laxis nigro guttulatis vestitus. Folium quadripollicare ligulato spathulatum, basi bene petiolatum, apice contractum trimucronatum. Pedunculus sexpollicaris apice pauciflorus. Bracteae pedicellos aequantes. Cupula recta per tres lineas clausa. Lacinia triangularis libera summa bilinearis dein caudata. Laciniae inferiores exacte sub ortu laciniae summae fissae, triangulae, sensim in caudas abeuntes. Peru. Chachapoyas. Matthews. (Herb. ill. Boiss.)

31. MASDEVALLIA MASTODON Rchb. fil. in Bonpl. III. 69: ex flore (quem solum teneo) affinis M. Schlimii: labello flabellato apice acuto inflexo, tepalis ligulatis apice retusis emarginatis, latere antico tricarinatis, carina medio in falculam descendentem exeunte. Flos illi M. Schlimii Linden aequalis. Tubus tamen paulo longior et curvus, per duplam longitudinem connatus. Lacinia summa triangula per duas lineas, dein in aristam subbipollicarem extensa. Laciniae inferiores sub ortu aristae imparis jam fissae, curvo triangulae, longi aristatae. Inde omnino dispar est species Masdevalliae Lindeni et polyanthae quae cum labello lamelligero, tum sepalis inferioribus alte coalitis recedunt. Flores atropurpurei. März. Ocanna. 6000'. Wagener.

32. MASDEVALLIA SCEPTRUM Rchb. fil. in Bonpl. II. 283: aff. M. Schlimii Lind.: pedunculo gladiato ancipiti, apice bene racemoso, cupula brevissima recta, sepalo summo brevissimo, triangulo dein aristato, sepalis inferioribus incurvo semiovatis longe connatis, tandem fissis, triangulis caudatis, tepalis oblique cuneatoovatis acutis, labello lineariligulato basi cordato, apice apiculato, marginibus lateralibus inflexo, carinis triangulis geminis in disco, androclinii cucullo bene denticulato. — Pedunculus validus compressus utrinque elatus, apice lo ge racemosus. Bracteae oblongae acutae hyalinae pedicellis breviores. Flores quam in Masdevallia Schlimii Lind. (Funk et Schlim. 1497) minores; atropurpurei, setis aureis. — Pamplona: la Baja. Januar. 8—9000' Nr. 1200. Schlim.

33. MASDEVALLIA SCHLIMII Lind. Rchb. fil. in Bonpl. II. 283: aff. Sceptro Lind., Rchb. fil.; folio spatulato obovato obtuse acuto, racemo paucifloro, flore majore, labio inferiori longiori, tepalis oblique panduratis acutis, angulo inferiori bicarinato, igitur duplici, labello ligulato, portione inferiori antice utrinque obtusangula in lineas 2 elevatas portionis anterioris transeunte, gynostemio gracili, androclinii cucullo integerrimo. — Inter haec gregem flores maximi. Folii ambitu, natura pedunculi, tepalis, labio diversissima. — Merida. 6000'. Mai 1847. Funk u. Schlim. Nr. 1497. — Rchb. fil. Bonpl. II. 23. Merida. 5000'. Januar. Wagener.

— Typus *Masdevalliae Echidnae* Rchb. fil. —

34. MASDEVALLIA VERRUCOSA Rchb. fil. in Linn. XXII. 819. Rchb. fil. Bonpl. II. 24 (sub Pleurothallide): rhizomate scandente polyrrhizo vaginis magnis paleaceohyalinis vestitis, caule secundario dense laxeque vaginato abbreviato, folio basi cuneato, dein oblongo, apice angustato, minute mucronulato, pedunculo valido dense asperoque verrucoso medio univaginato, apice flexuoso, racemo elongato, sparsifloro, bracteis arctis apice acutis, floribus inversis, sepalo impari lineari lanceolato, dein lineari apice dilatato, s. lateralibus oblongis margine inferiori antice implicitis apice lineari setaceis, tepalis oblongo triangulis acutis, nunc altero margine angulatis repandisve, labello a basi ligulata medio rotundo apice ligulato retuso margine medio rotundato ac apice retuso denticulato, callis 2 semilunatis laceris in medio, gynostemio gracili supremo margine membranaceo denticulato. Folia usque tres et dimidium pollices longa, superne sesquipollicem lata. Pedunculus aequilongus seu longior. Flores 4—5 lineas longi, flavovirides cum striis purpureis. Apices reflexi sepalorum lateralium et apex porrectus summi sepali memorabiles. Pamplona: la Baja. Funck et Schlim. — Caracas. 5000′. November. Wagener.

35. MASDEVALLIA ECHIDNA Rchb. fil. in Bonpl. III. 69: aff. M. verrucosae: pedunculo densissime papulis subulatis linearibus papuloso, ovario hystricino, cupula brevissima, setis linearibus carnosis, tepalis integris ligulatis apice carnosis, labello sigmoideo basi lamella superunguiculari aucto, dein carinaeformi, apice rhombeo, androclinii cucullo obsoleto. Perigonium subcarnosum. Sepala per duas ad tres lineas connata. Cupulae vertex acute papulosus carinatus in sepali setam lineari teretem carnosam exiens. Mentum obtusum buccatum. Sepalorum setae deflexae. Tepala linearia apice rotundato carnosa, margine inferiori medio angulata. Labellum sigmoideum: unguis liber tectus a lamella lineari brevi basi adnata apice retuso carnoso inflexo; per curvaturam semilunato introrsum carinatum; adnata lamella apicis rhombea complicata carnosa, basi utrinque breviter ciliata. Gynostemium tepalis duplo brevius, androclinium levissime trilobulo marginatum denticulatum. — Flos brunneus, prope illi M. Wagenerianae Lind. aequalis. Pedunculus tripollicaris. Bracteae non muricatae pedicello breviores. Bei 6000 Seehöhe im März. Ocanna. Wagener.

36. MASDEVALLIA OCHTHODES Rchb. fil. in Bonpl. III. 70: aff. M. verrucosae Rchb. fil. sepalis lateralibus ante apicem rectangulo erectum tumidis, tepalis ligulatis acutis, labelli lobis lateralibus semiovatis integris, lobo medio oblongo toto margine serrulato, carinis 2 in medio integris, gynostemii alis semiovatis medio emarginatis. Usque pedalis. Internodia infima brevissima, trilinearia. Vaginae membranaceae elongatae. Folium basi petiolato lineare canaliculatum per sex lineas, dein in laminam spatulato oblongam apice contracto acutam (tridentatam) expansum. Pedunculus subpedalis gracillimus dense verrucosus vaginis 2 arctis membranaceis vestitus. Racemus elongatus pluriflorus, internodia infima nunc valde distincta. Bracteae ochreatae oblique acutae, carinatae, multipustulatae. Flos carnosus, flavidus, trilinearis—quadrilinearis. Sepalum impar lanceum in apicem ligulato teretem carnosum eductum. Hac specie detecta M. verrucosam haud ad Pleurothallides pertinere sentio. Auf Steinen. 6000′. März. Ocanna. Wagener.

1323. OCTOMERIA *R. Br.*

H. Kew ed. 2. V. 211. — Walp. Ann. III. 523.

1. OCTOMERIA SURINAMENSIS Focke in Tidsch. vor de Wis. Nat. Wetsch. II. p. 200. 1849: foliis solitariis lanceolatis, floribus axillaribus fasciculatis, sepalis ovatis attenuatis basi subconnatis, petalis oblongis basi acutis, apice attenuatis, labello trilobo, lobis lateralibus falcatis erectis, intermedio undulato basi bicristato, cristis longitudinalibus purpureis dorso in angulum obtusum productis. Caules monophylli, teretes, articulati, vaginis fibrosis marcescentibus vestiti, folio breviores. Folium lanceolatum, processu petiolum mentiente in caulem attenuatum, crassum, coriaceum,

12—14 cent. longum, 17—20 mm. latum; juniora margine purpurascentia. - Flores fasciculati, ad basin folii congesti, brevi pedunculati, bracteati, flavi. Bracteae imbricatae sub anthesi emarcidae, persistentes. Perianthium patens. Sepala ovata, att o nuata, basi paululum connata. Petala oblonga, basi acuta, apice attenuata, sepalis aequilonga. Labellum trilobum, cum pede columnae articulatum lobis lateralibus falcatis erectis, intermedio lacerato-undulato, apice reflexo, apiculato, basi bicristato, cristis longitudinalibus purpureis, postice in angulum obtusum desinentibus. Columna teres, leviter arcuata, basi paul o producta, cum ovario continua, purpureo striata; clinandrio concavo. Anthera terminalis, opercularis, cristata, bilocularis, albida. Pollinia octo oblongo obovati, plano compressa, per paria apice materie viscida cohaerentia, flava. Ovarium sulcatum. Habitat in arborum truncis ad rivum Parae. Julio et Nov. Pollinia antherae operulo remoto per paria sibi invicem incumbentia reperiuntur, 2 paria in quovis loculo ⁚ ⁚ ⁚ ⁚ ita ut primo intuitu non nisi 4 adesse videantur.

2. OCTOMERIA SCIRPOIDEA Rchb. fil. in v. Mohl et v. Schldl. B. Z. 1852. 856: caulibus secundariis teretiusculis (fid. Pöpp.), articulatis, vaginatis, articulo summo valde elongato, nudo, folio terminali, subulato (?), obscure cum caulis internodio summo articulato, fasciculo florum laterali in folii basi, bracteis (anthesis tempore? exsiccatione mala?) emarcidis, perigonii phyllis 5 linearibus acutis subaequalibus, labello unguiculato, trilobo, lobis lateralibus falcatis basilaribus, lobo medio producto pandurato retuso, nervis lateralibus ante basin cariniferis; gynostemio gracili incurvo, androclinio trilobo, lobo postico acuto, lobis lateralibus obtusis. — *Aspegrenia scirpoidea* Endl. Pöpp. Labium roseum. Flos reliquus ex cl. Pöppig citrinus. Cuchero. Pöppig.

1324. LEPANTHES *Sw.*

(Act. Ups. VI 85. — Walp. Ann. III. 523.)

I. BRACHYCLADAE: axes secundarii, quam primarii breviores, cum axi primario acutangulo ascendentes, hinc quasi distichifoliae.

II. MACROCLADAE: axes secundarii, quam primarii manifeste longiores, vulgo rectanguli cum axi primario. „Acaules".

A. ELONGATAE: racemi foliis aequales; seu longiores.

a. Tepala medio mutica.

α. Folia orbiculata seu oblonga. (nunc obtuse acuta.)

αα. Tepala utrinque acuta.

1. LEPANTHES AVIS Rchb. fil. Xenia. Tab. 50. II. 5—7.

2. LEPANTHES IONOPTERA Rchb. fil in Bonpl. III. 70: aff. L. capitaneae Rchb. fil.: sepalo utroque lineari-lanceo, inferiori apice bidentato, tepalis transverse et humiliter obtriangulis, labelli lobo utroque oblongo obtusato. — Elongata. Caules secundarii pollicares ad bipollicares, tenues. Vaginae arctae ostio triangulo exampliatae; ostio et super nervos minute ac apice auriculatae. Folium a basi cuneata lineari oblongum apice obtuse acutum, marginatum, apice tridentatum dente medio minuto, pollicem longum, quatuor lineas medio latum. Racemus capillaris apice tri-quadriflorus. Bracteae minute scabridae ipsae minutissimae. Perigonium atroviolaceum vivum certe prope pollicem longum ubi expansum ab apice apicem usque sepalorum. Nervus transversus a basi in apicem tepalorum. — Ocanna. Wagener.

ββ. Tepala manifeste obtusata.

3. LEPANTHES CAPITANEA Rchb. fil. in Bonpl. III. 241: aff. L. bilobae Lindl. tepalis basi obtusangulis superne ligulatis linearibus ciliatis, labelli lobis panduratis introrsum

acinaciformibus (apical), gynostemio sub medio labellifero. Gracilis, quinque—septempollicaris. Caulis secundarius vaginis quatuor ad sex vestitus. Vaginae arcte appressae ostio dilatato subcordatae acutae limbo ac nervis omnibus minute muriculatis. Folium coriaceum cuneato ovale marginatum apice tridentatum. Pedunculi 1—2 capillares basi nudi, superne laxe racemosi, flexuosi. Bracteae triangulae ovariis pedicellatis ter ad quater breviores. Sepalum superius triangulum, inferius paulo latius, aequale, sed apice bidentatum. Tepalorum laminae ciliatulae dimidium superius lanceum apice obtusate extrorso; dimidium inferius obtusangulum brevius; unguis brevissimus. Labelli lobi margine ciliatuli subpanduriformes, dimidium superius introrsum acutum, subacinaciforme. Gynostemium apice postice bene excisum, supra basin labelligerum. Blüthe getrocknet kirschroth. Valley of Lloa, 168. Jamieson.

β. Folia ovalia bene acuta.

4. LEPANTHES OTOSTALIX Rchb. fil. in Bonpl. III. 241: folio chartaceo oblongo apice lineari, tepalis ligulatis utrinque acutis juxta unguem transverse carinatis, tepalis ovatis peltatis. Tenuis, quinquepollicaris. Vaginae apice infundibulari ostio subcordatae, nervi et limbus ostii bene muriculati. Folium a basi lineari cuneato oblongum apice subito ligulato lineare tridentatum, marginatum. Racemus capillaris elongatus multiflorus. Bracteae triangulae acutae ovariis pedicellatis duplo breviores. Sepalum superius triangulum, inferius subaequale apice bidentatum. Flores flavi. Woods Western side of Pichincha. 296. Jamieson.

B. EFFUSAE: racemi foliis manifeste breviores.

a. Tepala lacinula seu angulo medio aucta.

5. LEPANTHES ANDRENOGLOSSA Rchb. fil. in Bonpl. III. 241: aff. L. monopterae Lindl. tepalorum dimidio superiori ovali acuto, inferiori triangulo, lacinula lineari ciliata minuta extrorsa inter utrumque ante lineam carinatam paginae inferioris, labello minuto clandestino triangulo apice bifido margine ciliato, gynostemio basi labellifero. Plantula caespitosa. Caules tenues, tri—quadripollicares, septem ad octovaginati. Vaginae in nervis minutissime muriculatae ut lentium bonarum egeas ad videndos muriculos: ostium cordatum limbo tumido minute muriculato. Folium horizontale papyraceum cuneato oblongum ante apicem subito per quartam lineae apice retuso tridentatum tenuissime marginatum, inferne violaceum. Pedunculi capillares uni—biflori. Sepalum superius ovato triangulum, inferius paulo brevius et latius apice bifidum. Alabastri perigonium supra ovarium cordatum. Flores flavi. Quito. 66. Jamies.

b. Tepala medio mutica.

§. 1. *Laxiflorae:* racemi rari laxi.

6. LEPANTHES WAGENERI (Effusae) Rchb. fil. Bonpl. III. 70: nulli bene affinis, tenuis, vaginis arctis violaceis muriculatis, folio orbiculato, racemo brevi, tepalis dolabriformibus abbreviatis, labelli lobis anguste oblongis apice inferiori acutis, margine inferiori reduplicatis. — Planta facie Pleurothallidis punctatae Lindl. Dense caespitosa. Vaginae arctae supra nervos atque ostio explanato triangulo minute muriculatae. Folium basi petiolare per breve spatium, ceterum orbiculare apice minutissime tridentatulum, infra violaceum. Racemus folio brevior. Bracteae ochreato triangulae laeves. Flores flavi. Sepalum superius ovatum acutum; inferius ovatum bidentatum. Tepala oblonga sursum oblique ascendenti retusa, apice acuta (hinc dolabriformia diximus) pone apicem inferiorem sessilia, haud ultra sepalum superius producta. — Ocanna, April. Wagener.

7. LEPANTHES AQUILA BORUSSIAE Rchb. fil. in Bonpl. II. 22: gracilis, pusilla, caule secundario tenui 5 articulato, vaginis arctis ostio cordato triangulo expanso ciliato, folio lanceolato, utrinque attenuato, apice minutissime trilobulo, racemis capillaribus 3—4 abbreviatis seu folio subaequalibus, bracteis vaginatis retusis medio acutis,

sepalis triangulo cuspidatis, lateralibus basi coalitis, tepalis semilunatis, extrorsis, apice superiori obtusis, inferiori erosulo bidentato, labello bilobo, lobo utroque dolabriformi, angulo superiori subfalcato introrso, apice inferiori obtuso, facie interna utrinque pone marginem lamellifera, gynostemio ultra labellum porrecto, rostello terminali, obtuso, obreniformi, medio apiculato, androclinio medio dorso acuto. Affinis Lepanthi monopterae Lindl. Haec species omnibus partibus tertia major gaudet labio altius inserto, columna longiori, tepalis utrinque acutis. Columna cum alis similis aquilae borussicae. Flores violacei. Caracas. Wagener.

§. 2. *Distichae:* racemi arcti quasi bipectinati.

8. LEPANTHES LINDLEYANA Oersted et Rchb. fil. Xenia Tab. 50. III. 8—10.

9. LEPANTHES TURIALVAE Rchb. fil. in Bonpl. III. 225 (Effusae): similis L. cochleariformi Sw. vaginis arctis, ostio tantum angusto microscopice muriculatis, folio ovato acuto bene limboso, racemi pectinati bracteis parvis muricatis, sepalo inferiori alte bifido, tepalis incisione triangula extrorsa acuta bilobis, labelli lobis obtuse triangulis. Caulis tres — quatuor pollices altus incluso folio. Flos ex Dr. Oersted icone. Sepala triangula rubro-carnea. Tepala flavida, superne purpurea in angulo interno. Labii lobi et columna purpurea. 3000'. Oersted.

10. LEPANTHES ERINACEA (Effusae) Rchb. fil. in Bonpl. III. 225: aff. monopterae Lindl. quinquepollicaris, vaginis ostiisque magnis cordatis valde hispidis, folio pergameneo oblongo in apicem ligulatum apice tridentatum producto, racemis congestis abbreviatis, bracteis navicularibus acutis hispidis, sepalo superiori triangulo, inferiori bifido utrinque acuto, tepalis introrsum triangulis obtusis imbricantibus, labelli lobis triangulis. Planta rigida floribus flavis. Tepala basi et labium fuscorubra. Turialva in Costarica. Oersted.

1325. STELIS *Sw.*

(Ind. occ. 1549. — Walp. Ann. III. 524.)

DISEPALAE.

1. STELIS CHACHAPOYENSIS Rchb. fil. in Bonpl. III. 224: aff. St. spirali Pers. folio oblongo ligulato angusto angustissime petiolato acuto; spica elongata, bracteis acuminatis flores excedentibus, tepalis reniformibus, labello rhombeo obtusangulo abbreviato, linea crenulata carinata per medium. Planta gracilis subpedalis. Caulis secundarius abbreviatus. Vaginae paucae apice acuminatae hinc radicibus perforatae. Folium vix duos pollices longum, dimidium non latum. Spica prope spithamaea, hinc flexuosa. Sepalum superius triangulum, inferius semiovatum apice bidentatum. Gynostemii anguli obtusati. Chachapoyas. Mathews. (Herb. ill. Boiss.)

2. STELIS FLACCA (Disepalae) Rchb. fil. in Bonpl. III. 240: nulli affinis, magnitudine Stelidis ophioglossoidis Lindl., floribus majoribus, tepalis a basi cuneata transversis margine externo inflexocucullatis, labello transverso retuso basi utrinque pone unguem dente retrorso instructo, gynostemii angulis acutis. Caespitosa, quadri—quinquepollicaris. Caules secundarii bi—trivaginati. Folium lanceolatum anguste petiolato attenuatum duos pollices longum, quartam tertiamve pollicis latum. Spicae plures tenues congestae folio longiores. Bracteae cupulato triangulae abbreviatae. Perigonium siccum atratum membranaceum. Sepalum superius triangulum, inferius transverse ovatum apice bidentatum. Western side of Pichincha, on trees. 735. Jameson.

3. STELIS MAXIMA Lindl. — Rchb. fil. in Bonpl. II. 115. Bipedalis et ultra, caulis ex axilla folii caulis secundarii anni praecedentis 1 internodia longa (angulata?) vaginata; folium oblongum acutiusculum basi cuneatum, 4—5 pollices longum, $1\frac{1}{2}$ latum; pedunculus ultra pedalis, basi a spatha membranacea stipatus, parte inferiori 4 articulata 5—6 pollicari vaginis ochreatis acutis valde abbreviatis vaginata; racemus multiflorus, quaquaversus; bracteae cupulatae acutae ovariis pedicellatis breviores, flores

illis S. grandiflorae duplo majores, perigonium basi coalitum, bilabiatum, sepalum superius triangulum, inferius concavum, ellipticum, imo apice bidentatum; tepala latissima, brevissima, latissime cuneata, apice retuso biloba cum apiculo, linea carinata transversa supposita, involuta; labellum subaequale, antice tamen lato triangulum, disco carnosum; gynostemium antrorsum utrinque brachiatum, brachiis ligulatis incurvis acutiusculis. Hartweg 1407.

4. STELIS DIALISSA (Disepalae) Rchb. fil. in Bonpl. III. 71: bracteis ochreatolanceis distichis squarrosis. Dialissa pulchella Lindl. in Tayl. Ann. XV. 1845. p. 107. — Planta pedalis-quadripollicaris. Caulis secundarius paucivaginatus. Folium lanceolatum, acutum. Racemus folio aequalis seu multo longior. Pedunculus nunc squamulis minutis vestitus, nunc vaginis falcatis. Bracteae longae a basi ochreata lanceo falcata distichae floribus pedicellatis longiores. Perigonium bivalve. Sepalum superius ovatum, s. inf. apice obtuse bilobum; utrumque alte coalitum. Tepala ovata seu elliptica minuta. Labellum rhombeum obtusangulum per discum transverse bicarinatum. Gynostemium omnino Stelidum: clavatum, truncatum. Limbus infrastigmaticus bilobus lobis rotundatis, rostelli dens erectus integer. Popayan Hartweg! Tolima Linden 1275!

5. STELIS CUPULIGERA Rchb. fil. et Warszew. Bonpl. II. 114: simillima S. maximae, duplo minor, tepalis rhombeis dimidio superiori carnosis, labello rhombeo, per discum tricarinato, gynostemii brachiis retusis. Caulis validus siccus angulatus. Folium oblongum acutum basi cuneata angustatum, 5 pollices longum, unum latum. Pedunculi 2--3, basi a spatha nervosa lancea acuta stipati; sub inflorescentia tri-quadrivaginati, vaginis ochreatis arctis apice acutis; racemus multiflorus, floribus spiraliter secundis; bracteae basi brevi ochreatae cupulatae dorso longe triangulae acutae uninerves ovariis pedicellatis breviores; sepalum superius triangulum, inferius ovatum apice bidentatum; tepala minuta et labellum supra descripta; gynostemii rostellum productum ligulatum retusum. Flores illis St. grandiflorae aequales. Peru. Warszewicz.

6. STELIS MELANOXANTHA (Disepalae) Rchb. fil. in Bonpl. III. 71: aff. St. maximae Lindl. tepalis unguiculatis reniformibus, labello unguiculato rhombeo per discum lamella medio sinuata aucto, gynostemii angulis ascendentibus quadratis. Ultra pedalis. Radices adventitiae numerosae tenues. Vaginae ternae, superne valde amplae tubulosae. Folium multum varians: oblongum, ellipticum, obovatum, tres ad septem pollices longum, dimidium ad duos pollices latum, basi petiolari attenuatum usque per pollicis longitudinem. Racemus solitarius folio longior. Bracteae triangulo cupulares apice tantum acutae. Perigonium atroviolaceum disco et basi sepali inferioris flavis. Sepalum inferius apice bidentatum. Gynostemii anguli divergentes externe oblique retusi. Flores illis Stelidis maximae Lindl. duplo minores. Ocanna. Wagener.

— Labellum integrum cochleare. —

7. STELIS SCANSOR Rchb. fil. in Bonpl. III. 241: caule primario funiformi scandente basi polyrrhizo, caulibus secundariis appressis abbreviatis, foliis ovalilanceolatis, spica minutiflora folio longiore, bracteis ochreatis acutis bene distichis, sepalis triangulis; tepalis cuneatis apice retusis involutis, labello cuneato „cochleari" (ex Lindl.). Adsunt rhizomata pedalia. Caules secundarii vix bipollicares Folia bipollicaria, basi bene cuneata, medio tertiam pollicis lata. Racemus folio longior. Gynostemii anguli obtusanguli erecti. Inflorescentia juvenis illam Pholidotae ludit ob bracteas (hic hyalinas) dense imbricantes. Occurs near Pasto in woods. Sept. 1845. 448. Jamieson.

TRIVALVES.

— Labellum integrum transversum retusum. —

8. STELIS MAJOR Rchb. fil. in Bonpl. II. 23. Spithamaea, caule secundario abbreviato dense vaginato, vaginis retusis apiculatis (summa acuta) imbricantibus, folio a basi anguste ligulato obovato spatulato obtuso caule longiore, spatha membranacea carinata

acuta, pedunculo folio duplo longiori, tertio inferiori hinc brevivaginato, superne racemoso, racemo subsecundo (saltem ex sicca planta), bracteis membranaceis vaginatis acutis, sepalis basi connatis ovatis transversis apiculatis, tepalis obtusangulo oblongis transversis minutis, labello transverso basi latissime cuneato margine involuto, dilatato, obtuso bilobo seu trilobo, callo magno in tota basi obtuso antice quadricarinato, nunc tri—quadrisulcato, androclinio trilobo, lobo medio acuto. Prope Stelidem grandifloram, cujus flores minores et labium et tepala diversissima. Caracas. S. Nevada. Wagener.

9. STELIS GRANDIS Rchb. fil. in Bonpl. III. 70: characteribus artificialibus pene St. crassifoliam Lindl., elata, oblongifolia, pluri- et longispicata, tepalis a basi unguiculata hastato reniformibus margine externo scabris, labello flabellato antice bisinuato hinc trilobulo, callis 2 obtusangulis in disco. — Caulis secundarius 6—8 pollicaris paucivaginatus. Folium octo pollices longum, tres medio latum, basi petiolari ligulatum. Spicae plures folium aequantes seu excedentes; basi 2—3 vaginatae. Spica disticha multiflora internodiis inferioribus magnis. Bracteae ochreato triangulae apiculatae, ovaria aequantes. Sepala basi coalita ovata. Tepala trinervia. Anguli laterales antici gynostemii obtusi. — Flores flavi. Merida. 6000'. Septbr. 1846. 1049. Funck et Schlim. (Herb. Boiss.)

— Labellum integrum transversum retusum cum apiculo. —

10. STELIS CAPILLIPES Rchb. fil. in Bonpl. III. 240: aff. St. Jamiesoni folio lanceolato angusto pergameneo, pedunculo capillari nunc gemino folium duplo excedente, sepalis oblongis margine puberulis. Plantula tenuis incluso pedunculo quadripollicaris. Caulis secundarius minutus vix pollicaris vaginis ostio oblique retuso laxis vestitus. Folium nunc ellipticum, vulgo anguste lanceolatum longe attenuatum, usque subbipollicare. Spathula tenuis. Pedunculus unus seu geminus folium bene, nunc longe excedens; vaginula una seu gemina minuta vestitus superne flexuosus. Bracteae ochreatae acutae minutae. Sepala oblonga sicca atrofusca. Tepala brevissima cuneata basi obtusangulo-rhombea, transversa. Labellum obovatum emarginatum cum apiculo minuto in sinu, callo magno obovato bilobo per discum. Gynostemium a basi arcta velutina dilatatum. Limbus foveae erectus bilobus cum apiculo interjecto. Valley of Lloa. 265. Jameson.

Obs. Ill. Lindley hanc ad suam St. flexuosam Lindl. in Ann. nat. hist. XII. 1843. p. 397. duxit. Stelides ratione florum distinguuntur. Stelidis flexuosae flores non descripti. Inde nescio quomodo probari possit, utramque eandem. Juvat addere descriptionem Lindleyi originariam et juvat, non accipere nomen adeo incerte et illegitime introductum.

Stelis flexuosa Lindl. Folio oblongo acuto tridentato marginato in petiolum angustato, racemis subgeminis filiformibus flexuosis multifloris 2—3 plo longioribus, bracteis minimis ovatis acutis pedicellis brevioribus. Peru, Mathews no. 1910. — Leaves about 3/4" long. Racems drooping, sigtac, bracts very minute at the angles of the axis.

11. STELIS TRICHORRHACHIS Rchb. fil. in Bonpl. III. 71: aff. St. capillari folio oblongolanceolato longe petiolari, acuto, sepalis ovatotriangulis, tepalis cuneatis retuso involutis, labello flabellato retuso cum apiculo bene evoluto in medio (nunc uncinato), linea transversa callosa ante marginem anticum. Caulis primarius fusiformis polyrrhizus. Caules secundarii 3—5 pollices alti; mediocres. Folium tres, quatuor pollices longum. Pedunculus capillaris 6—8 pollicaris tenuis. Bracteae triangulo ochreatae angustae. Flores illis Stelidis ophioglossoidis aequales, brunnei. Anguli antici gynostemii obtusati. Ocanna. 6000'. Oct. 1850. Schlim. 168.

— Labellum ligulatum angustum retusum integrum. —

12. STELIS BRACCATA Rchb. fil. et Warsw. Bonpl. II. 114: aff. St. truncatae, scabridae, argentatae (tristylae), sepalis oblongolanceolatis, tepalis cuneatis bis emarginatis apice callosis, labello rhombeoligulato retuso, gynostemio curvato (!). Vaginae basi-

lares sericeae transverse rugulosae amplae; illae caulis secundarii sesquipollicares s. pollicares, amplae, carinatae, arpophyllaceae, apice oblique retuso falcato apiculatae super nervum medium. Folium valde carnosum a basi cuneata lineariligulare acutum 3—4 pollices longum, 0,3''' latum; racemi capillares minutiflori plurimiflori foliis breviores, fasciculati more Pl. effusarum, subsecundi, bracteae ochreatae apiculatae ovario pedicellato breviores, sepala basi coalita, oblongolanceolata, obtusata, tepala brevissima, cum labello et gynostemio retuso conferruminata more Stelidum, cuneata, apice calloso trilobula, lobulo medio minore producto, labellum ligulato rhombeum retusum, gynostemium basi paulo gracilius: androclinium cupulatum antrorsum, rostellum deflexum. Caules longissimi cum foliis spithamaei. Flores minutissimi. Neu-Granada. Warszewicz.

— Labellum rotundatum integrum, antice obtusatum. —

13. STELIS ATROVIOLACEA Rchb. fil. in Bonpl. III. 70: aff. St. Hallii: folio ligulato spatulato, spica aequilonga disticha, bracteis cupulatis amplis apiculatis, sepalis oblongis intus velutinis (!), tepalis reniformibus unguiculatis margine externo limbosis, labello flabellato antice rotundato utrinque extus acuto, carina anguliformi transverse insiliente ante apicem. — Caulis secundarius bipollicaris amplivaginatus. Folium valde coriaceum a basi angusta, bipollicare. Spica aequilonga ante anthesin secunda. Flores illis St. ophioglossoidis Lindl. aequales, valde firmi, vivi atropurpurei; sicci atri. Gynostemii anguli omnino obtusati. Ocanna. März. 5000'. Wagener.

— Labellum oblongum integrum acutum. —

14. STELIS COSTARICENSIS Rchb. fil. in Bonpl. III. 224: aff. St. lamellatae Lindl. compacta, caulibus secundariis laxe vaginatis, vaginis nervosis, amplis, folio suo duplo-triplo brevioribus, folio carnosissimo cuneato oblongo apice acuto trimucronulato, racemo folio subduplo breviori, bracteis ochreatis distichis, tepalis truncatis cum mucronulo, labello ovato acuto utrinque ante basin calloso, callo utrinque a margine introrsum obtusangulo limbo squamuloso, canali inter callos. Caulis 2—4 pollices altus. Flores ex icone Oerstediana viridiflavi. Cartago in Costarica. Oersted.

15. STELIS GUTTUROSA Rchb. fil. in Bonpl. II. 23: caule secundario valido, vagina mediana ampla acuta tenui, folio a basi angustissima spatulato obtusato, spatha florali membranacea acuta basi gutturosa, spicis 1—3 folio paulo brevioribus, a basi floridis, bracteis cupuliformibus retusis super nervum medium acutis, floribus minutis quaquaversis, sepalis ima basi coalitis, ovatis, apiculatis, tepalis cuneatis retusis, limbo externo retuso incrassato, trinerviis, nervis ante apicem retusum evanidis, labello pandurato acutiusculo, carinulis 2 semilunatis in disco, androclinio trilobo, lobis lateralibus acutis minutis, medio lobo magno trilobo. So gross, wie St. angustifolia Kth. Caracas. Wagener.

16. STELIS HYLOPHILA Rchb. fil. in Bonpl. III. 241: aff. St. ascendenti Lindl. et spathulatae Pöpp. Endl. foliis ligulatis obtusiusculis breve petiolatis caule brevioribus, spica folium subaequante (nunc gemina) dense disticha, bracteis ochreato triangulis hyalinis conspicuis, floribus minutissimis, tepalis cuneato ovatis transversis, labello ligulato apice triangulo, disco incrassato. Caules incluso folio usque spithamaei. Folia tri—quadripollicaria. Pedunculus prope basin usque floridus. Sepala ovata. Forests of the Andes at 8000'. 687. Jamieson.

17. STELIS EUBLEPHARIS Rchb. fil. in Bonpl. III. 240: aff. ciliatae Lindl. (atropurpureae Hook., purpurascenti A. Rich. Gal.?) caulis vagina ampla, labello triangulo subacuto per discum papulis argenteis more Stelidis argentatae ornato, carina transversa ante basin. Adest unicum specimen parvulum. Caulis secundarii summitas pollicaris. Folium oblongo lanceolatum acutum bene marginatum, basi petiolare, haud bipollicare, tertiam pollicis latum. Spatha anceps minuta. Pedunculus bi—tripollicaris. Bracteae distantes cupulatae apiculatae pro planta magnae. Sepala ovatotriangula margine ciliolata, pone marginem puberula. Tepala cuneata apice retuso medio inflexa cum apiculo. Gynostemii anguli antici obtusi. Pululagua, on trees. 264. Jamieson.

18. **STELIS STENOPHYLLA** Rchb. fil. in Bonpl. III. 70: aff. St. ophioglossoidi (Sw.?) Lindl. folio lineari-ligulato basi bene petiolari apice obtuse acuto, sepalis ovatis obtusis, tepalis a basi cuneata transverso oblongis, labello cordato triangulo lateribus hinc minute serrulato, disco incrassato. — Caulis secundarius gracilis tripollicaris. Folium tripollicare, tres lineas latum. Pedunculus aequilongus bene secundiflorus. Flores fuscati. Bracteae ochreato apiculatae angustae. Flores illis Stelidis lamellatae paulo minores. — St. angustifolia Kunth! optime recedit foliis oblongo-lanceolatis bracteisque amplo cupulatis. — Ocanna. 3—6000′.

19. **STELIS DISCOLOR** Rchb. fil. in Bonpl. III. 241: aff. Stelidi adscendenti Lindl. foliis spatulatis vernizilis, spica spirali, sepalis discoloribus intus papuloso velutinis ovatis apiculatis, labello ovato medio apiculato disco bicalloso, callis papulosis. Rhizoma amplum crassum, uti caulis vaginis muriculatis velutinis vestitum. Folia bipollicaria, tripollicaria, vernixia, tertiam pollicis lata. Spica quadri—quinquepollicaris. Bracteae cupulatae retusae cum apiculo. Flores texturae validae extus atropurpurei, intus grisei. Tepala a basi unguiculata triangula obtusata transversa. Anguli antici laterales gynostemii obtusi trianguli erecti. Towards the base of Pichincha, in ravines. 691. Jamieson.

— Labellum trilobum lobis subaequalibus obtusiusculis. —

20. **STELIS ARGENTATA** Lindl. B. Reg. 1842. misc. 78: Huc: *Stelis Heylidyana* Focke in Tidsch. vor de Wis. Nat. Wetsch. p. 201. 1849: folio oblongo lanceolato coriaceo obtuso emarginato, spica secunda multiflora folio multum longiore, floribus minutis trigonis patentibus, sepalis deltoideo cordatis acutis, petalis minutissimis, truncatis, labello aequalibus. Herba epiphyta, caespitosa. Caulis teres, brevis, monophyllus. Folium oblongo-lanceolatum, coriaceum, obtusum, profundiuscule emarginatum, in petiolum subvaginatum attenuatum, nitidum, strictum, apice subrecurvum, decimetri longitudine. Spica axillaris, nempe a basi petioliformi folii orta, erecta, multiflora, gracilis, flexuosa, folio multo longior, bracteata, purpurascens. Bracteae vaginantes. Flores minuti, trigoni, alterni, secundi, nutantes, viridi purpurascentes. Perianthium patens. Sepala valvata, aequalia, basi subconnata, deltoideo-cordata, acuta, patentissima, subconvexa, pagina interiore sub lente pilis sparsis obtecta. Petala minutissima, truncata. Labellum petalis conforme. Columna nana, apice dilatata cum ovario continua. Anthera opercularis, cordato ovata, subbilocularis, septo scilicet medium versus evanescente. Pollinia 2 oblongo ovata, libera, sulphurea. Capsula oblonga, triquetra, adpressa erecta. Sylvae Surinami passim. Aprili. Decembri. Dicta Henrico Heylidy. Non longe distat a Stelide ophioglossoide, attamen satis diversa.

21. **STELIS EUSPATHA** Rchb. fil. in Bonpl. III. 225: aff. St. atrae Lindl. folio a basi lineari cuneato oblongo lanceolato acutiusculo, spatha carinata apice inflexo minute uncinato, spicis folium excedentibus tenuissimis, sepalis oblongis nervo medio carinatis, tepalis cuneatis limbo retuso, cucullato, involuto medio umbonato, labello cuneato obtriangulo apice trilobo, lobis lateralibus anticis obtusis, lobo medio dentiformi parvo; carinis duabus ligulatis divergentibus in basi. Caules secundarii validi tri—quadripollicares. Vaginae paucae distantes. Vagina summa tubuliformis ostio retusa. Folium tri—quadripollicare. Spicae capillares fasciculatae. Flores quaquaversi minuti flaveoli. Bracteae cupulato triangulae pusillae. Gynostemii anguli laterales antici obtusi. — Bolivia. Bridges.

22. **STELIS CAESPITIFICA** Rchb. fil. in Bonpl. III. 71: aff. Stelidi Serrae Lindl.: foliis lanceolatis, sepalis triangulo lanceolatis, labelli trilobi lobo medio producto obtuse triangulo, lateralibus obtusangulis extrorsis, disci carinulis duabus transversis. Dense caespitosa. Caulis secundarius paulo pollicem excedens squamis fuscis ostio amplis vestitus. Folium a basi tenui lineari elongata lanceolatum acutum, marginatum, inferne in sicca quinquenerve, bipollicare, quintam pollicis latum. Spatha hyalina parva brevis. Pedunculus gracillimus 4—8 pollicaris, superne dense floridus; secundi-

florum. Bracteae cupulato triangulares, pedicellos aequantes. Perigonium flavido-brunneum in sicca, basi violaceum. Tepala ovata retusa cum apiculo obtusato, omnino obtusangula, nervo medio ante apicem evanido. Gynostemium haud omnino genuinum; androclinii limbus posticus evolutus trilobus cucullato antrorsus; androclinii dens medius dentesque infrastigmatici aeque revoluti. Ocanna. Wagener.

Labellum trilobum lobo medio acuto.

23. STELIS PORPAX Rchb. fil. in Bonpl. II. 23: pusilla, vix bipollicaris, caule secundario laxe tenuique vaginato, folio carnosissimo a basi anguste lineari spatulato obtuso, spatha florali acuminata hyalina, spica capillari folio subaequilonga, bracteis vaginatis oblique retusis acuminatis, internodii parti liberae scilicet a bractea non tectae subaequilongis, floribus quaquaversis albis, sepalis ima basi tantum coalitis, oblongis acutis trinerviis, tepalis ima basi unguiculatis cordato dilatatis, limbo externo incrassato, nervo uno transverso, labello porrecto trilobo, lobis lateralibus obtusangulis, medio producto acute triangulo, gynostemio utrinque brachiato (more St. tristylae, Ruprechtianae). Descriptio floris St. apricae Lndl. similis, at planta longe recedit et Stelidi micranthae, papaquerensi affinis. Stelis atra Lindl. videtur recedere tepalis retusis et sepalis obtusis. Caracas. 5000'. Oct. Wagener.

24. STELIS LOBATA Rchb. fil. in Bonpl. III. 241: aff. St. Lindeni foliis oblongolanceolatis, racemi bracteis triangulis acuminatis, tepalis trilobis, labello basi tridentato, dentibus lateralibus posticis acutis, lobo medio producto anguste triangulo, callo inter dentes posticos. Scandens. Caules secundarii bi—tripollicares. Folium paulo ultrapollicare, quatuor — quinque lineas medio latum, apicem versus marginatum. Racemus longe exsertus, flexuosus Sepala oblongolanceolata, sepalum summum majus Tepala parva triloba, lobi laterales obtusangulo divaricati, lobus medius obtusatus Labellum tepalis longius; lobus medius pagina inferiori externa tricarinulatus sub callo umbonatus. Anguli laterales antici gynostemii bene evoluti angusti. From woods near Pasto. Sept. 1845. 451. Jamieson. Obs. Labelli fabrica subsimilis in St. Porpace Rchb. fil. et St. spathulata Endl. Pöpp.

25. STELIS SPATHULATA Endl. Pöpp. Rchb. fil. in Bonpl. II. 22. Specimina Lindeniana cum Pöppigianis bene congruunt.

— Labellum trilobum lobo medio retuso. —

26. STELIS NITENS Rchb. fil. in Bonpl. II. 22: caule secundario abbreviato, vagina laxa obtuse acuta, folio oblongo basi valde attenuato spatulato, apice sensim obtusato, spatha carinata acuta, abbreviata, pedunculo folio duplo longiore, dimidio inferiori bi—trivaginato, vaginis brevibus basi arctatis dein amplis, nervo mediano in apiculum setaceum porrectum excurrente, spica subsecunda (?), bracteis amplis cupulatis, nervo semper in apicem acuminatum excurrente, sepalis oblongo triangulis obtusis trinerviis altius sc. tertia parte coalitis, tepalis abbreviatis apice retuso obtuse obscureque trilobulis, labello a basi cuneata dilatato trilobo, lobis lateralibus extrorsis triangulis obtusis, lobo medio extrorso latissimo quadrato obtusangulo brevi, gynostemii rostello aequaliter obtuseque trilobo. Prope Stelidem ophioglossoidem. Caracas. Wagener.

1329. RESTREPIA *H. B. Knth.*

(H. B. K. I. 367. — Walp. Ann. III. 525.)

— Pleurothallidiformes. —

1. RESTREPIA OPHIOCEPHALA Rchb. fil. in Seemann Bonpl. II. 88. Huc: Pl. puberula Klotzsch in Otto et Dietrich Allg. Gtz. 1854. p. 393: caulibus secundariis seriatim-caespitosis 2—3 articulatis erectis teretibus, basi incrassatis, vaginis duabus appressis, apice rotundatis submucronatis fuscescentibus aridis obtectis; folio carnoso-coriaceo ovato-lanceolato, apice brevissime tridentato, basi torto attenuato caule

secundario subduplo breviore; flore solitario subpollicari ex albido-roseo, basi breviter gibboso, perigonii foliolis duobus exterioribus magnis linguiformibus, extus intusque furfuraceo-puberulis, interioribus membranaceis conformibus coccineo-striatis albo-villoso-marginatis rectis triplo brevioribus; labello recto integerrimo albido obtuso excavato perigonii foliolis interioribus duplo breviore; gynostemio recto pallide coccineo brevi, infra antheram bidentato; pedunculo bractea magna, apice obtuse-tridentata suffulto.

2. RESTREPIA UJARENSIS Rchb. fil. in Bonpl. III. 225: tenella, vaginis amplis nervosis, folio lineari lanceo, racemis unifloris paucis seu solitariis, sepalo dorsali fornicato lanceolato, sepalis lateralibus lanceolatis, lobo medio cuneato retuso, gynostemii androclinio producto lanceo. Planta bi—tripollicaris caespitosa habitu Lepanthis seu Pleurothallidis tenuioris. Flores virides ex icone Oerstediana. Vaginae siccae fuscae, amplae, dorso bene carinatae, acutae. Folium vix unciale, sat crassum, lineas duas —tres latum. Flores minuti octomeriacei, sepalum dorsale imbricatum super sepala lateralia. Gynostemium gracile. Ujaras in Costarica. Oersted.

Obs. A cl. Lindley ad Pleurothallides relata, quae binis tantum gaudent polliniis dum haec quaternis gloriatur.

3. RESTREPIA HYPOLEPTA: huc ex Lindl. Foliis I. Feb. 19, 1853: Pinelia. Sepala patula, petaloidea, libera; lateralibus basi inaequalibus. Petala conformia, minora. Labellum majus, indivisum, c. columna continuum, eique basi adnatum, (basi bicallosum?). Columna nana, reclinata, fere horizontalis, margine petaloideo („Stigma prominens" Pinel.). Pollinia 4, basi materie glutinosa colligata, caudicula glandulaque nullis? (caudiculis 2 pulvereis replicatis. Pinel.) Anthera (columnae apice adnata, carnosa, 4-locularis. Pinel.) — Herba epiphyta, Brasiliensis; pseudobulbosa, monophylla. Folium carnosum, apice tridentatum, Lepanthis more. Pedunculus terminalis, filiformis, distanter vaginatus, uniflorus.

This very singular plant has been communicated by the Chevalier Pinel, a French botanist, who has paid attention to the minute species of the order, and after whom it is named. The materials consist of one plant glued to paper, with some sketches and manuscript notes. Although insufficient to enable me to speak with certainty of some of the parts of fructification, they are enough to show that it is a very curious and wholly new form. In habit the plant would be a Pleurothallis, if the stem had not the fusiform condition of an Aulizean Epidendrum. The leaf is quite that of many Pleurothallids. Of the flower, which is very nearly half an inch from tip to tip of the back sepal and lip, M. Pinel says, „Ce serait un Cattleya en miniature sans l'expansion foliacée du gynostéme et l'adhérence du labellum à la colonne". The anther, which I have not seen satisfactorily, is represented by him as resembling that of the same genus; as are the pollen-masses, of which he says, „Quatre masses polliniques, sur deux lames semblables à celles du grand Cattleya Harrisoniae et de tous les Cattleya". This I have not been able to verify; M. Pinel's drawing is at variance with his description, and shows to each pair of pollen-masses the same kind of glutinous secretion of matter as is found in many species of Pleurothallis. This, and some other parts of the structure therefore remain for further examination.

P. hypolepta. — Wild in Brazil; near Rio Janeiro-Pinel (v. s. sp.) — Herba caespitosa, 2-pollicaris. Caules pseudobulbosi, $1\frac{1}{2}$ l. longi. Folium solitarium, sessile, carnosum, ovatum, acutum, obsolete tridentatum, $3\frac{1}{2}$ l. longum. Pedunculus filiformis, 9 l. longus, vaginis 3 distantibus arcte convolutis. Flos solitarius, virens, vi expansus semipollicem latus. Sepala ovata obtusa. Petala obovata, obtusa, minora, uninervia. Labellum basi verosimiliter 2-callosum, linguiforme acutum, planum, sepalis duplo majus.

— Antenniferae. —

4. RESTREPIA ANTENNIFERA Hb. B. Kth.: Rchb. fil. in Bonpl. III. 70. Subpedalis, labello a cuneata basi ligulato, apice retuso bilobulo, ante medium utrinque obtusangule postposita arista extrorsa, carinis tribus validis per discum. — Caulis secundarius

compressus vaginis apice falcatis ancipitibus vestitus, infimis nigro guttulatis. Folium a petiolari basi oblongum utrinque cuneatum, apice trimucronulatum nervo dorsali carinatum. Pedunculus solitarius, nunc plures, apice bracteati, floridi. Sepalum summum a lancea basi subulatum apice incrassatum. Tepala subaequalia. Sepalum inferius cuneato flabellatum apice trifidum. Gynostemium gracile sursum obtuse decurrentique alatum apice postice apiculatum. — Ocanna. 6000'. Wagener. (Ocaana: fleur jaune d'or, rayée de pourpre. Schlim. 738! — an 739? Parama; labellum unici floris non adest. Etiam habemus: Loxa v. Warsoewicz! flore majori iconi Humboldtianae similior.)

5. RESTREPIA WAGENERI Rchb. fil. in Bonpl. II. 23: caule secundario valido, vaginis laxis amplis, ostio producto apice acuto dorso carinatis, spatha florali subaequali, folio transverse ovato acuto, basi rotundato, pedunculo folium excedente capillari, sepalo summo linearilanceo, dein subulato, apice subdilatato, tepalis subaequalibus paulo brevioribus, sepalo impari ligulato retuso basi utrinque angulato, apice denticulato, nervis 3 carinulatis, ceterum laevi, gynostemio gracili clavato, postice apice unidentato. R. elegans folii ambitu, dentibus labii, tepalis brevibus diversa. Merida. 7000'. Wagener.

6. RESTREPIA LANSBERGII Rchb. fil. et Wagener, Rchb. fil. in Bonpl. II. 23: gracilis, acaulis, caule secundario arcte vaginato, folio angusto oblongo, utrinque attenuato, apice obtuse tridentato, spatha florali membranacea, carinato falcata, floribus more generis sub folium versis, pedunculis capillaribus, sepalo summo a basi paulo dilatato lanceo setaceo apice incrassato, sepalo inferiori oblongo apice bidentato, tepalis sepalo summo aequalibus, multo angustioribus, paulo brevioribus, labello ligulato retuso, basi utrinque obtusangulo, nervis tribus elevatis, papulis muriculato, gynostemio clavato gracili, labello tepalorum dimidium subaequante paulo breviore. R. antennifera recedit vaginis amplis, ancipitibus, maculatis, circuitu folii, sepalo inferiori integro. R. guttulata sepalum superius et tepala habet aristata, sepalum inferius medios versum connatum. Nostra habet sepala tria superiora flava maculis rubris. Labium flavum punctis quibusdam purpureis. R. eleganti aequimagna, caulis secundarius autem longior. Caracas. 5000'. Toto anno. Wagener.

7. RESTREPIA ERYTHROXANTHA Rchb. fil. — Rchb. fil. in Bonpl. II. 23. Spithamaea. Vaginae membranaceae pallidae, densae. Folium oblongum. Flores plures, majores, quam R. antenniferae, sepala superiora tria purpurea. Labellum et sepalum inferius vitellina. 7000'. Januar. Merida. Wagener.

8. RESTREPIA ASPASICENSIUM Rchb. fil. in Bonpl. III. 70: aff. R. Wageneri folio lanceolato, angulis labelli posticis rectis non obtusatis, labelli portione antica a cuneata basi oblongo ligulata ante apicem retusum constricta, carinis ternis elevatulis per discum. Gracilis. Caulis secundarius subbipollicaris vaginis ancipitibus apice acutis impunctatis vestitus. Folium sesquipollicare lanceolatum acutum. Flores quam in Restrepia Wageneri ter minores. Sepalum superius a lancea basi subulatum apice clavatum. Tepala similia tertia breviora. Sepalum inferius oblongum apice bilobulum, lobi acuti. Nervi carinati laterales basi divergentes marginales. Gynostemium gracile margine superiori anguste alatum. Aspasica. Wagener.

9. RESTREPIA RHYNCHANTHA Rchb. fil. et Warscew. Bonpl. II. 114: aff. R. cucullatae sepalo inferiori apice bidentato, labello ab ungue brevissimo dilatato utrinque angulato excavato, dein ligulato acuto, carina utrinque in fundo, in disco antico confluente. Adest folium oblongocuneatum acutum nulli alii speciei pertinens earum, quae adsunt, appositum, forsan hujus Restrepiae, quacum missum. Pedunculus gracilis 7—8-pollicaris. Bractea oblonga acuta ovario aequalis seu longior. Perigonium externum ultra bipollicare. Sepalum superius a basi angusta triangula setaceum. Sepalum inferius oblongo triangulum, apicem versus valde attenuatum imo apice bidentatum seu bifidum. Tepala valde membranacea, basi triangula ($^{1}/_{4}$ pollicaria) setacea. Labellum supra descriptum, anguli subbasilares. Gynostemium exacte R. cucullatae:

ala anguste oblongoquadrata utrinque abrupta et cucullo super antheram. Pollinia pyriformia basi cuspidata! — Flores illis Restrepiae cucullatae majores. Peru Warscewicz.

Obs. Ab inclyto Lindley in Fol. VIII. ad cucullatam relata. Hujus labellum ligulatum integrum, illius trilobum, hujus tepala linearia acuta basi attenuata, illius a basi oblonga lata caudata.

1327. CHRYSOGLOSSUM *Bl.*

(Bl. Tabellen. 7. Bijdr. 337.)

— Nolui interponere inter Pleurothalleas, hinc post Restrepiam posui. —

1. CHRYSOGLOSUM VILLOSUM Bl. De Vriese Illustr. t. 12. f. 4.

1335. MICROSTYLIS Nutt.

(Gen. Am. 2195. — Walp. Ann. III. 525.)

1. MICROSTYLIS DISCOLOR Lindl.: stem leafy, leaves ovate, oblong, abruptly petioled, undulated, plaited: lip ovate, entire, cucullate at the base: column two horned at the apex: sepals and petals all turned to one side. Ceylon. Fl. July. Mrs. Col. Walker made the drawing. (not „Guoindoo" as in the page ic.) — Wight Ic. V. I. 1631. 1851.

2. MICROSTYLIS LUTEOLA R. W.: stem leafy at the base, leaves ovate, subcordate at the base, acute, plicate: sepals obovate, obtuse, the middle one narrower: petals linear, obtuse, emarginate: lip somewhat 2-lobed, lobes broad, spreading, fimbriato-dentate. Flowers yellow. Ootacamund, Neilgherries, fl. August. Nearly all. to M. versicolor, but certainly dist. It grows under the shade of bushes and among long grass on the hightest peaks of the Hills. — Wight Ic. V. I. 1632. 1851.

3. MICROSTYLIS DISEPALA Rchb. fil. in Linnaea XXVI. 142. Caulis secundarii internodio cylindraceo, pseudobulboso, pollicari, vaginis membranaceis oblongo-triangulis vestito; foliis evolutis binis e vaginis linearibus in laminas orbiculares acutas dilatatis, pedunculo elongato (7 pollicari) angulato, apice clavato, racemoso, bracteis lineari-lanceis brevissimis, pedicellis elongatis, floribus posticis, sepalo inferiori (igitur summo) oblongo, apice bidentato, sepalo superiori lanceo triangulo obtusiusculo, tepalis linearibus circinnatis, labello orbiculari basi obtusissime cordato, margine obsoletissime undulato lobulato, basi pro gynostemio recipiendo foveato, gynostemio minuto, rostello tridentato. — Semipedalis. Curcucuti Caracas. Wagener.

4. MICROSTYLIS PARTHONI: huc: *Malaxis Parthoni* Morren, bullet. de l'acad. roy. Belg. 1839 p. 485 c. tab. Pseudobulbis ovato-acutis, f. binis ovato-lanc., acutis; scapo pentagono, spica sertuliformi densa depressa; concavo-umbilicata, labello concavo ovato acuto. — Hab. in sylvis humidis Brasiliae.

5. MICROSTYLIS VENTRICOSA Endl. Pöpp. Rchb. fil. in Bonpl. II. 22. Carac. Wagen.

Obs. Porro huc revocandae sunt omnes Dieniae Lindl. ob solum directionis columnae characterem haud sufficientem olim separatae. „Yet I shrink from that creation of genera, which some observers find so easy" Lindl. Quam bene congruant haec genera ex eo patebit, quod ill. Lindley exacte eandem plantam, Microstylidem monophyllam et sub Microstylide, et sub Dienia (Dienia Gmelini Lindl.!!) citata quidem Herminii Monorchidi icone, quod abhorret, descripsit. Etiam D. muscifera Lindl. ! videtur eadem.

6. MICROSTYLIS CONGESTA: *Dienia congesta* Lindl. O. 22. Rchb. fil. in Bonpl. III. 259. Planta pedalis — tripedalis. Pseudobulbus vaginis hyalinis occultus. Folia terna — quina oblonga, basi cuneata, apice acuminata, quinquenervia, septem usque pollices longa. Pedunculus longe exsertus, angulatus (siccus), apice cylindraceo racemosus.

Bracteae subulatae pedicellos superantes. Sepala oblongo lanceolata obtuse acuta. Tepala lineari falcata. Labellum ovatum apice trilobulum, lobulo medio porrecto, omnibus callosis. Gynostemium latum super labellum flexum. Capsulae oblongae tuberculatae. Specimina quam specimina nepalensia majora. Hongkong. Novb. Hance!

7. MICROSTYLIS FUSCA. Huc *Dienia fusca* Lindl. Orch. 22.

8. MICROSTYLIS CYLINDROSTACHYA. Huc *Dienia cylindrostachya* Lindl. Wight ic. V. 1. 1630 (1851): stem one leaved; leaf ovate obtuse: spike dense cylindrical: perianth flattened: lip excavate, thickened at the ape, nearly entire; column very short. Lindl. Simla Countess Dalhousie — Edgeworth. Left. fig. — spec. Dalh. Drawing right side — E. M. Edgeworth.

9. MICROSTYLIS CARINATA. Huc *Dienia carinata* Rchb. fil in Bonpl. III. 223: aff. Dieniae congestae Linpl. flore duplo majori, bracteis lanceis deflexis, labello tridentato, dente medio maximo, lineis carinatis duabus convergentibus in disco. Planta spithamaea. Folia inferne tria a vagina oblonga acuta basi lato rotundata seu cuneata nervosa, tres quatuorve pollices longa, duos lata. Pedunculus angulatus breviter bisquamatus. Bracteae lanceae aristatae deflexae. Ovaria angusta hexaptera bracteis (ubi pedicellos includis) longiora. Sepala oblonga. Tepala linearia. Gynostemium Microstylidis, sed in labellum incumbens. Flos illi Microstylidis Rhedii aequalis. 2144. Cuming. Phil.

10. MICROSTYLIS CRISPATA. Huc *Dienia crispata* Lindl. Ann. N. H. XV. 1845. p. 385: caule diphyllo, foliis ovato-oblongis obtusis pedunculo brevioribus, spica densa cylindracea, sepalis oblongis obtusis, petalis linearibus, labello ovato indiviso, capsulae angulis crispato-laceris. Mexico (Hartweg). Stem and spike, taken together, about a feet high.

11. MICROSTYLIS CORDATA. Huc: *Dienia cordata* Lindl. Bot. Reg. 1838 Misc. 134: folio solitario subrotundo cordato membranaceo-marginato, racemo tenui elongato, sepalis lateralibus ovatis obtusis, intermedio lineari-oblongo, petalis linearibus, labello carnoso trilobato; laciniis lateralibus auriculaeformibus intermedia ovata. Mexico, Barker. — It has a single cordate leaf, a slender spike of green small flowers, and narrow ovate pseudobulbs. It is a plant of no beauty, and differs from D. Myurus in the form of its lip, the number and form of its leaves, and in its long slender spike.

12. MICROSTYLIS MACROSTACHYA Lindl. Huc etiam monente ill. Lindley in herbario suo pertinebit Dienia calycina Lindl.

13. MICROSTYLIS MYURUS. Huc *Dienia Myurus* Lindl. Orch. 23.

1337. MALAXIS *Sw.*

Act. Holm. 1800. p. 223. t. 3.

Hoc genus nuper unius tantum speciei putaverunt. Omne tamen Oberoniae genus certe nil differt. Videtur inesse discrimen in pollinia. At non inest. Oberoniae enim enimvero quaedam etiam pollinia gerunt apicibus connexa, qualia intercurrunt in Malaxide. Id etiam in iconibus Wightianis pulchre repraesentatur. Genus autem ita auctum felicissime congruit cum Liparide cui tot adscribuntur species gaudentes foliis coriaceis — Cestichides, dum aliae longe serpent. Etiam Microstylides adsunt distichifoliae. Totum Oberoniae genus ex habitu tantum conditum. Hic tamen mihi non sufficit, nec certe ill. Lindley, qui nuper exclamavit in verba illa pulchra: „Yet I shrink from that creation of genera, which some observers find so easy."

Addo locupletissimam Monographiam Lindleyanam (Folia VIII. 1859), ut totus error statim aboleatur eo oriundus, quod ill. noster Lindley ab initio putavit, Oberonias suas gaudere polliniis geminis, nec quaternis.

OBERONIA.

L. O. 15. Malaxis; § Ensifera, Blume, Bijdr. I. 393.

Sepala libera, dorsali minore, saepius reflexa. Petala minora. Labellum sessile, columnam amplectans, immobile, varie divisum, raro

integrum, nunc basi pulvinatum aut carinatum, saepius concavum. Columna nana, teres, basi angustior, clinandrii angulis anticis acutis. Anthera 1-locularis. Pollinia 4, cerea, libera, incumbentia, nunc obliqua et inaequalia. — Herbae epiphytae. Folia equitantia. Spicae (v. Racemi) terminales. Flores minuti. Omnes Asiaticae, Australasicae, Polynesicae v. Mascarenenses.

The species now collected into this curious genus are for the most part inhabitants of the tropics of Asia, both continental and insular. One is found in the Mauritius and Bourbon, one in Eastern Australia, and five in the South Sea Islands. None have as yet been brought from Africa.

They divide readily into stemless and caulescent species: and although some are as it were intermediate, as in § 2 * * *, yet there is no practical difficulty in recognising to which section a species belongs.

§. 1. ACAULES Lindl. Folia VIII.: caule nano vel parum evoluto, foliis omnibus fere radicalibus.

* *Labello indiviso vel obsolete lobato.*

1. MALAXIS IRIDIFOLIA. Huc l. c.: *Oberonia iridifolia* (L. O. 15: Cymbidium iridifolium, Roxb. Fl. Ind. 3, 459); bracteis petalisq. ovatis serratis, labello multifido varie lobato, foliis longissimis ensiformibus.

A. labello basi pectinato apice bilobo multifido. Sylhet, Roxb. h. s. sp.

B. labello basi pectinato apice bilobo obtuso denticulato. Hb. Wallich sine numero, h. s. sp.

C. labello ovato emarginato alte serrato. Burma, Griffith. h. s. sp.

Peduncle two edged. Spike very long and slender. Flowers yellow. Evidently a variable plant, and probably appearing under other forms than those above mentioned. O. iridifolia of Griffith is probably O. Brunoniana, Nr. 6; of the Bot. Mag. is O. tahitensis, Nr. 4.

2. MALAXIS CYLINDRICA. Huc l. c.: *Oberonia cylindrica* (Lindl. in Bot. Register, 1840, misc. 23); bracteis serrulatis, floribus intus pilosis, petalis serratis, labello oblongo basi latiore emarginato margine fimbriato — Philippines, Cuming (Island of Bohol) h. s. sp. and v. v. c. — Leaves 6—7″. Spikes stout, much longer. Peduncle compressed, winged only near the base. Flowers very small, and compact, green.

3. MALAXIS GRIFFITHIANA. Huc l. c.: *Oberonia Griffithiana* (Lindl. Sert. Orch. t. 8 B.); bracteis lineari-lanceolatis denticulatis, petalis obtusis fimbriatis papillosis, sepalis acutis longioribus, labello multifido papilloso in laminam bipartitam producto — Moulmein, Griffith (common on trees in damp places), h. s. sp. — A small species with narrow sabre-shaped blunt thin leaves shorter than the spikes, which are covered to the base with scattered flowers. Sepals pale green. Petals and lip dull purplish brown. This has slight tendency to becoming caulescent.

4. MALAXIS TAHITENSIS. Huc l. c.: *Oberonia tahitensis* (O. iridifolia Bot. Mag. 4517); bracteis duplicato-serratis, sepalis dorso verrucosis, petalis linearibus integerrimis, labello oblongo apice bilobo integro laciniis latis subfalcatis basin versus rotundato denticulato — Otaheite, Bidwill — Leaves 5—6″, broad, thick. Spikes not much longer, stiff, with two-edged peduncles, closely covered with brownish yellow flowers. Differs from O. iridifolia in its petals as well the other marks above indicated. — Huc: Oberonia iridifolia Lemaire Jardin fl. II. 113.

5. MALAXIS DENTICULATA. Huc l. c.: *Oberonia denticulata* (Wight, Ic. 1625); bracteis dentatis, petalis ovatis acutis integerrimis, labello triangulari dentato nunc apice producto bis bidentato — Southern Hindostan, Wight (Iyamally Hills, near Coimbatore, fl. Jul. Aug.) — I have not seen this. — Leaves short, broad, thick. Spikes much longer, drooping, very dense. Flowers „dull orange". Peduncles completely 2-edged. Varies much in size according to Wight. Huc etiam:

Oberonia denticulata R. Wight Ic. V. I. 1628. 1851: leaves broad, ensiform, stem short, flatly, compressed, spike very long, closely covered with minute sessile flowers: bracts ovate, obtuse, reflexed: lip irregularly triangular, denticulate, somewhat two lobed at the apex, each lobe bidenticulate. Flowers dull orange colour. Jyamally Hills near Coimbatore, flowering July and August. Of this species I have given two fig. to show how it varies in size. The lip of the smaller one differs from that of the larger, but in all other respects, except in size, they seem sufficiently to accord.

6. MALAXIS BRUNONIANA. Huc l. c.: *Oberonia Brunoniana* (Wight, ic. 1622): bracteis denticulatis, petalis linearibus integerrimis, labello circulari integerrimo infra apicem 2-lobum constricto denticulo interjecto — Southern Hindostan, Wight (Iyamally Hills, near Coimbatore); Khasya, Lobb. h. s. sp. — Leaves as much as 8 or 9 inches long, very broad. Spikes dense, stiff, erect, not much longer. Peduncles completely 2-edged. „A large and handsome species: flowers large for the genus; lip and sepals dark brownish; petals pale yellowish". R. W. This is probably the O. iridifolia of Griffith's Notulae III. 274, found at Churra growing on a species of Eugenia. If so it will also be an Assam plant. Huc etiam:

Oberonia Brunoniana R. Wight. Ic. V. I. 1851. N. 1622. 1851: leaves ensiform, succulent, nearly as long as the raceme: stem compressed at the base, furnished near the apex with a short narrow falcate sheathing leaf or common bract: raceme compact: bracts ovate, denticulate, acute: sepals ovate, obtuse, reflexed, a little longer than the narrow lanceolate petals: lip entire, broad, cordate at the base, obtusely 3 lobed at the apex, the middle one small or sometimes obsolete. Flowers olive brown, the left somewhat darker towards the centre. — Jyamally Hills near Coimbatore, flowering June and July. — A large and handsome species; flowers large for the genus; lip and sepals darks brownish coloured, petals pale yellowish. It appears quite distinct from all the following. As being the most compicuous of the genus, so far as I know it, I have taken the liberty of dedicating it to the Presid. of L. Soc., the first of living Botanists.

7. MALAXIS FORCIPATA. Huc l. c.: *Oberonia forcipata*: bracteis dentatis, petalis linearibus nanis recurvis, labello circulari denticulato apice abrupte forcipato — Ceylon, Thwaites (Hewahette district, on trees, 2511) h. s. sp. — Much like O. Brunoniana in structure, except that the lip is toothletted all round and that is extended apex is much smaller. The petals are moreover much shorter, and the whole plant, not more than 4" or 5" high, has none of the robustness of that species. Peduncle slightly 2-edged. Bracts very deciduous. „Flowers dingy yellow", Thwaites, from whom I have an excellent sketch along with the specimens.

8. MALAXIS LONGIBRACTEATA. Huc l. c.: *Oberonia longibracteata* (L. O. 15): bracteis subulatis aliabsatris multo longioribus, petalis ovatis acutis integerrimis, labello subrotundo obsolete 4-lobo, caule in pedunculum monophyllum ancipitem producto — Ceylon, h. s. sp. — Of this little plant the leaves are thin, narrow, and nearly straight. The stem is extended enough to bear one or two rather distant leaves at its base, and another at its summit immediately below the flower spike; in my specimens it is from 2 to 3 inches long. Perhaps therefore it would be better to place the species in the caulescent division.

9. MALAXIS PLATYCAULON. Huc l. c.: *Oberonia platycaulon* (Wight, ic. 1623): bracteis serrulatis, petalis filiformibus sepalis aequalibus, labello carnoso oblato trilobo; lobo medio tridentato, pedunculo latissime alato — S. Hindostan, Wight (Courtallum; Pulney Mountains in September) h. s. sp. — Flowers „whitish or pale yellow". Peduncle four lines wide up to the very flowers, quite thin. Huc etiam:

Oberonia platycaulon Wight. Ic. V. I. 1623. (1851): leaves long, narrow ensiform; stem flatly compressed, nearly as broad as the leaves; raceme lax, flowers longish pedicelled: bracts ovate, acute, the length of the ovary, fimbriate on the margin; sepals ovale, lanceolate, acute, petals linear, narrower and slightly shorter than the

sepals; lip 3 lobed, the middle one the least. Flowers whitish or pale yellow. — Pulney Mountains, fl. September. The remarkably compressed stalk of the raceme and the peculiar lip of this species easily distinguish it from all the others represented here.

10. MALAXIS LINDLEYANA. Huc l. c.: *Oberonia Lindleyana* (Wight, ic. 1624): bracteis ciliatis, petalis filiformibus integerrimis, labello subrotundo truncato obsolete quadrilobo integerrimo — Khasya Hills, Lobb.; S. Hindostan, Wight (Iyamally Hills, near Coimbatore) h. s. sp. — Leaves very succulent, broad and often dolabriform. Spikes longer, drooping. Peduncles narrow, the winged edges vanishing near the flowers which are „straw colour with a dull orange lip" (R. W.) My Khasya specimens have the front of the lip less lobed than in Wight's figure, and the petals are narrower. Specimens of the southern form I have not seen. Huc etiam:

Oberonia Lindleyana R. Wight. Ic. V. I, 1624. (1851): leaves ensiform, short, very succulent, slightly falcate: stem compressed, spike drooping towards the apex, densely covered with innumerable small sessile flowers: bracts ovate, somewhat obtuse, sub-denticulate on the margins, sepals broad, ovate, obtuse, entire: petals narrow linear; lip broad cordate at the base, crenate, twolobed at the apex; with a minute tooth between: all furnished with numerous minute opaque glandular (?) dots. Flowers straw colour, lip dull orange. — Jyamally Hills near Coimbatore, flowering August aud September. — The leaves of the species are very succulent, and with its long drooping raceme afford good distinguishing marks, which are amply confirmed by an examination of flowers. This species is remarkable on account of the opaque gland-like points scattered over the flowers. The bract is represented too pointed in the fig. I dedicate the species to the founder of the genus.

11. MALAXIS SETIFERA. Huc l. c.: *Oberonia setifera*: bracteis cymbiformibus integerrimis, petalis setaceis sepalis longioribus, labello obsolete quadrilobo truncato denticulato versus basin rotundato — Western India, (S. Concan, Dalzell.) h. s. sp. ex hb. Stocks, 38 — A very small species not exceeding 2½", flower spike included. Leaves quite sharp-pointed. Peduncles terete. Flowers perhaps the smallest in the genus — This might perhaps be better placed among the quadrifid species, further on.

12. MALAXIS TRUNCATA. Huc l. c.: *Oberonia truncata*: bracteis acuminatis serrulatis, petalis integerrimis oblongis, labello carnosissimo obtriangulari obsolete aequaliter 3-lobo — Ceylon, Champion (Hantané) h. s. sp. — Leaves about 4''' broad, and apparently thin. Peduncle broadly winged. Flowers small, green? From root to tip of erect spike 5".

** *Labello bifido.*

13. MALAXIS LUNATA Bl. Bijdr. p. 394. Huc l. c.: *Oberonia lunata* (L. O. p. 17. Rchb. fil. in Bonpl. Mar. 1, 1857): „foliis paucis ensiformibus basi vaginatis subincurvis, labelli limbo semilunato denticulato, capsulis oblongis" — Java Blume (Mt. Salak, flowering from October to February) — Lip often slightly 3-lobed according to Rchb. fil. Can this be O. truncata, Nr. 12?

14. MALAXIS VERTICILLATA. Huc l. c.: *Oberonia verticillata* (Wight, ic. 1626); bracteis angustis serrulatis, labello truncato in laciniis 2 aequalibus semibipartito, floribus verticillatis, capsula oblonga.

A. *grandiflora*; floribus majoribus glabris, habitu vegetiore — Nilgherries, Schmidt, 37; Pulney Mountains, Wight; Khasya, Lobb, h. s. sp. — Flowers green and orange (R. W.) Some of Schmidt's specimens in the Hookerian herbarium are 1' from root to tip of spikes. Peduncle terete except near the base.

B. *pubescens*; floribus minoribus pubescentibus, petalis latioribus — Ceylon, Thwaites, 2516, h. s. sp. — Rather less in stature than A, with much smaller flowers.

C. *densiflora*; floribus minoribus densis, habitu multo humilioré — Nilgherries, Schmidt, 36, h. s. sp. — The flowers appear to be much yellower than in A. Not more than 4" high.

D. *Khasyana*; floribus laxis multo minoribus glabris viridibus — Khasya, Lobb; at

2'—6000', Hooker and Thomson 118; h. s. sp. — A small form with short drooping spikes, never above 3—4" high. Flowers pale green.

E. gigantea: petalis spathulatis, labello basi dilatato laciniis apicis carnosis — Java, Junghuhn 294, h. s. sp. — Spikes in fruit more than a foot long. Capsules subsessile, obconical. Huc porro:

Oberonia verticillata R. Wight. Ic. V. I. 1626. (1851): leaves narrow, ensiform, subfalcate: raceme erect, or inclined, short peduncled; flowers verticelled: bracts ovate, lanceolate, acute, fimbriate on the margine, sepals short, broad, ovate, obtuse, petals sub-obovate, obtuse, longer than the sepals: lip oblong, slightly cordate at the base, 2-lobed at the apex, lobes broad, roundish, spreading, slightly crenulate on the margin. Ovary and sépals pale green, perianth dull orange. Neilgherries on branchs of trees, flowers during the rains between July or Oct., also on the Pulney Mountains. — This seems a very distinct species. I at first supposed it O. anthropophora, but a more careful consideration of the characters of the species led to the conviction of its being quite distinct.

15. MALAXIS PYRULIFERA. Huc l. c.: *Oberonia pyrulifera*; rhachi acutangula, bracteis integris acuminatis rigidis, petalis serrulatis, labelli bifidi lobis acutis parallelis, capsula pyriformi — Khasya Hills, Griffith (Myrung, on trees) h. s. sp. — Much like var D. of the last species, but the long-stalked pear-shaped fruit, and serrulate petals induce me, with much hesitation, to distinguish it. The flowers appear to be pale yellow with an orange lip.

*** *Labello trifido.*

16. MALAXIS TENUIS. Huc l. c.: *Oberonia tenuis*; bracteis setaceis floribus longioribus; petalis linearibus obtusis integris sepalis aequalibus, labelli lobis lateralibus elongatis filiformibus incurvis, intermedio cuneato leviter trilobo, angulis productis — Ceylon, Thwaites (Hittawaka, on trees, March, 2654) h. s. sp. — A slight erect thing with small thin lanceolate leaves. Spike erect, 2 inches long. Flowers minute „ochrey red. Lip and appendages dark red", Thwaites, from whom I have an analytical sketch.

17. MALAXIS BICORNIS. Huc l. c.: *Oberonia bicornis* (L. O. 16); bracteis setaceis floribus verticillatis longioribus, petalis ovatis, sepalo dorsali maximo, labelli lobis lateralibus lineari-lanceolatis erectis medio carnosis, intermedio brevi cuneato truncato. — Sylhet, Wallich, h. s. sp. — A small species with thin short leaves and long drooping dense verticillate spikes. An elevated fleshy line runs across the base of the lip and along the middle of each erect arm, forming a kind of crescent.

18. MALAXIS DEMISSA. Huc l. c.: *Oberonia demissa*; floribus verticillatis, bracteis ovatis subdentatis, petalis oblongis dentatis, labelli 3-fidi lobis subaequalibus, lateralibus rotundatis, intermedio ovato acuto — Terai, below Sikkim, J. D. Hooker 121, h. s. sp. — A low plant with thin spikes not longer than the thin broad blunt incurved leaves, about 2" long. Flowers green?

19. MALAXIS BRACHYSTACHYS. Huc l. c.: *Oberonia brachystachys* (Lindl. Sert. Orch. sub t. 8); floribus verticillatis, bracteis ovalibus integerrimis, petalis obtusis labelloque aequaliter 3-partiti lobis cuneatis denticulatis — Burma, Griffith, h. s. sp. — Another dwarf thin-leaved species, in habit much like the last.

20. MALAXIS JENKINSIANA. Huc. l. c.: *Oberonia Jenkinsiana* (Griffith, MSS.); floribus densissimis, bracteis setaceo-acuminatis denticulatis, petalis obtusis, dentatis, labelli 3-partiti lobis lateralibus majoribus fimbriatis, intermedio integro nunc 3-dentato.

A. labelli lobo medio tridentato, lateralibus bene fimbriatis — Assam, Major Jenkins (Deboroo Mookh) h. s. sp. — Somewhat inclined to be caulescent.

B. labelli lobo medio integerrimo, lateralibus dentatis — Khasya Hills, Lobb, h. s. sp. — About 5" high. Leaves narrow, erect, acuminate, as long as the spikes.

**** *Labello quadrifido, vel base quadrilobo.* (See Nr. 11.)

21. MALAXIS ENSIFORMIS Smith in Rees Cycl. Huc l. c.: *Oberonia ensiformis*. Oberonia acaulis, Griff. Notul. III. 275, ic. 286. Itin. not. 76, Nr. 1139); bracteis oblongis integerrimis, floribus verticillatis glandulosis, petalis sepalisq. aequalibus, labello oblongo quadrilobo, laciniis rotundatis, anterioribus productioribus — Naraînhetty in Nepal, Buchanan Hamilton; Khasya Mountains, Griffith (under Churra, on trees) h. s. sp. — The largest of the genus. A broken leaf before me must have been 18" Spikes dense, shorter than the leaves. Peduncles terete. „Leaves brownish, pallid. Sepals and petals reflexed. Lip projecting, 4-lobed. Flowers brownish, with clavate dot-like glands; sepals paler". Griffith. Capsules small, dark brown, very dense.

22. MALAXIS SIKKIMENSIS. Huc l. c.. *Oberonia Sikkimensis*; bracteis lanceolatis serratis, petalis linearibus integris sepalis aequalibus, labello quadrifido laciniis lateralibus semiovatis falcatis brevioribus — Sikkim, J. D. Hooker (low valleys 114) h. s. sp. — Leaves narrow acuminate, as long or longer than the slender spikes. Flowers more or less perfectly verticillate. Looks like a diminutive form of the last, but the lip has quite a different form and wants the clavate glands. The flowers seem to be green.

23. MALAXIS MYRIANTHA. Huc l. c.: *Oberonia myriantha*; bracteis setaceis denticulatis, petalis obtusis integris sepalis aequalibus, labelli oblongi quadripartiti medio scabri laciniis obtusis lateralibus duplo brevioribus falcatis. — Khasya, Griffith; at 2—4000', J. D. Hooker and T. Thomson, 113, h. s. sp. — Leaves narrow, rather thick, sometimes setaceo-acuminate, longer or shorter than the very densely flowered verticillate erect (?) spikes. Peduncles terete, with distant empty scales far below the flowers, which are dirty greenish yellow.

B. foliis angustioribus, floribus minoribus, labelli lobis acutioribus, lobis lateralibus rectis. — Khasya, at 4000', J. D. Hooker and T. Thomson, 117; Assam, Griffith, h. s. sp. — There seems to be no appreciable character by which this can be specifically divided from the last; unless mere size of flowers with small differences in the direction of the lobes of the lip can be so considered.

24. MALAXIS RECURVA. Huc l. c.: *Oberonia recurva* (Lindl. in Bot. Reg. 1839, misc. 8); bracteis ovatis integris, petalis obovatis, sepalis acutis aequalibus, labello subrotundo quadrilobo laciniis subrotundis anterioribus paulo minoribus mucronulo interjecto — Bombay, Loddiges, v. v. c. — A very small species. Leaves short acute. Spike recurved, quite green.

25. MALAXIS WIGHTIANA. Huc l. c.: *Oberonia Wightiana* (Lindl. in Bot. Reg. 1839, misc. 9. Wight, ic. 1627. O. Arnottiana, Wight, ic. 1628. O. stachyoides, A. Richard in Ann. des Sc. ser. 2. XV. 15, t. 1 A.); bracteis lanceolatis denticulatis, petalis linearibus integris, labelli quadrifidi lobis lateralibus erectis rotundatis, intermediis longioribus linearibus divergentibus — Nilgherries, and Pulney Mountains, Wight, Perrottet; Khasya Hills, Lobb; Ceylon, Thwaites 2506 (Newera Ellia Gardner) h. s. sp. — Leaves lanceolate, erect, always shorter than the slender erect or drooping spikes. Peduncles terete. Flowers pale green. This seems to vary more than usual in the present genus, in the form of its lip, the front lobes of which are either ligulate and denticulate at the point, or entire, or short and acute; and these differences seem to occur on the same or otherwise undistinguishable individuals. I can find nothing sufficient to separate my learned friend Wight's O. Arnottiana, whose bracts appear exactly the same as in O. Wightiana. and by no means furnished with long cilia, as is represented by his Indian draughtsman. — Huc porro:

Oberonia Wightiana Lindley in Hb. Wight et Bot. Reg. 1839. Misc. 9. Wight. Ic. VI. I. 1627. (1851): leaves broad, ensiform, acute: racemes very long drooping towards the apex: flowers scattered, short pedicelled: bracts broad ovate at the base, acute, denticulate at the apex: sepals ovate, obtuse, shorter than the linear obtuse petals: lip three - lobed, lateral lobes strap like embracing the base of the column, middle one prolonged, ending in two obovate spathulate spreading lobes, crenulate

on the margin. Flowers pale green. — Neilgherries and Pulney Mountains, flowering Aug. and Sept. — The ligulate lateral lobes of the lip of this species is peculiar and at once distiguishing it from the following very nearly allied species, with which if I mistake not, it was confounded in the first instance by Lindley.

Oberonia Arnottiana R. Wight. Ic. V. I. 1628. (1851): leaves ensiform, subfalcate, succulent racemes erect or slightly inclined towards the apex, scarcely drooping: flowers alternate, longish pedicelled: bracts ovate acute, ciliate, somewhat sheathing at the base; sepals ovate, acute, about the length of the narrow linear petals: lip cordate at the base, 3 lobed; lateral lobes broad ovate, obtuse, middle one prolonged, forked at the apex. Flowers pale green. — Neilgherries and Pulnies, flowering Septbr. — These two species were, I believe, mixed in the coll. sent home and named as above by Dr. Lindley. Now that they are distiguished, I have much pleasure in associating my friend with them by dedicating one of the two to him.

26. **MALAXIS THISBE.** Huc l. c.: *Oberonia Thisbe* (Rchb. fil. in Bonpl., Mar. 1, 1857); bracteis setaceis floribus subverticillatis brevioribus, petalis erectis sepalisq. concavis obtusis, labelli linearis basi pulvinati laciniis lateralibus setaceo-falcatis intermediis divaricatis denticulo interjecto — Philippines, Cuming h. s. sp. — Leaves thin, obtuse, shorter than the spikes. Flowers minute, brick-red when dry. Very near the next, but the blunt sepals and petals, shorter bracts and much smaller flowers seem to distinguish it pretty well. Huc porro:

Oberonia Thisbe Rchb. fil. in Bonpl. III. 223: aff. Oberoniae rufilabri Lindl., foliis (equitantibus) ensatis ligulato obovatis acutiusculis, (siccis margine tenui undulatis), floribus triplo minoribus, labello ligulato apice trilobo, lobis lateralibus setaceo falcatis retrorsis divaricatis, lobo medio minutissimo dentiformi, lacinia setaceofalcata antrorsa utrinque ante basin. Folia pollicaria seu paulo longiora, breviora, quatuor usque lineas lata nunc aequilata, nunc ante apicem dilatata bina, terna, quaterna. Pedunculus quadri-octopollicaris in altero specimine erectus, in altero curvatus. Bracteae setaceae flores minutos, (siccos cinnabarinoflavos) bene excedentes; plurimae steriles in pedunculi basi sub inflorescentia congestae. Racemus subverticillaris. Sepala ovatò-triangula; tepala linearilancea acuta. 2134. Cuming. Phil.

27. **MALAXIS RUFILABRIS.** Huc l. c.: *Oberonia rufilabris* (Lindl. Sertum Orch. t. 8 A.): bracteis setaceis floribus sparsis multo longioribus, petalis patulis sepalisq. acutis, labelli linearis bifidi basi pulvinati laciniis lateralibus setaceis intermediis lanceolatis divaricatis — Moulmein, Griffith (on trees in damp places) h. s. sp. — Flowers deep dull red, larger, than in the last. The petals which are acute fall back upon the sepals instead of standing erect as in that species.

28. **MALAXIS SCYLLAE.** Huc l. c.: *Oberonia Scyllae*: bracteis herbaceis setaceo-acuminatis floribus longioribus, sepalis lateralibus orbiculatis concavis dorsali lanceolate longiora, petalis lineari-lanceolatis falcatis ciliatis multo longioribus inflexis, labelli lobis lateralibus linearibus acutis asperis erectis intermediis divergentibus brevioribus apice in crinibus solutis — Ceylon, Thwaites, 3124, h. s. sp. — A most remarkable thing with minute crimson flowers whether opening or expanded, looking like a bunch of red tongues thrust from within a mask, worthy of a Gorgon. The leaves are erect, short, fleshy, bristle-pointed, according to an excellent drawing sent me by my indefatigable and most accurate correspondent, Mr. Thwaites. There does not seem to be any cushion at the base of the lip as in the two last, which is rather singular considering the very close relationship of all three.

§ 2. CAULESCENTES; caule elongato distiche folioso. (O longibracteata, Nr. 8 should perhaps be referred to this division.)

* *Labello indiviso v. obsolete lobato.*

29. **MALAXIS ANGUSTIFOLIA.** Huc l. c.: *Oberonia angustifolia*; bracteis ovatis complicatis integerrimis, petalis integris, labello subrotundo obsolete quadrilobo lobulis

anterioribus oblique truncatis v. emarginatis — Sikkim, Griffith (Dorjeeling); Khasya, Griffith; at 4000—5000', J. D. Hooker and T. Thomson, III. h. s. sp. — A very remarkable species with numerous distichous leaves, scarcely more than 1/2''' broad, although 8''' long. The flowers are perhaps the smallest of the genus, perfectly smooth, in ascending spikes from 1 1/2" to 2 1/2" long.

30. **MALAXIS PACHYSTACHYA.** Huc l. c.: *Oberonia pachystachya*; bracteis lanceolatis acuminatis sepalisq. hispidis, petalis nanis labelloque ovato acuto glabris — „S. Sea Islands", Catlett, 37, h. s. sp. — Leaves lancet-shaped, short, straight, from 3 to 5 on each side. Spikes shorter than the stems, in fruit nodding and very dense.

31. **MALAXIS IMBRICATA** Blume Bijdr. p. 395. Huc l. c.: *Oberonia imbricata* (L. O. 17); „caule simplici folioso, foliis compressis vaginatis conferte imbricatis, labelli limbo ligulato denticulato" — Java, Blume (Damp woods on Mounts Gede and Salak) flowering from September to December — Of this I know nothing certain. If a sketch from Kuhl and Hasselt's collection, for wich I am indebted to Prof Rchb. fil., really belongs to it, then it has oblong acute entire bracts, as long as the flowers, entire narrow petals, and an oblong emarginate lip, without any denticulation. The leaves are also so completely imbricated that even their points do not spread away, but form one unbroken line from the root to the origin of the spike.

32. **MALAXIS APOROPHYLLA.** Huc l. c.: *Oberonia aporophylla* (Rchb. fil. in Bonpl., Mar. 1, 1857); sepalis petalisq. aequilongis acutis, labello pandurato obtuse sagittato, apice latiore obcordato denticulato — Philippines, Cuming, h. s. sp. — Leaves short spreading 6''' by 3''' at the base, acute, about 9 on a side. Spike sessile drooping, covered with flowers to the very base. Huc porro.

Oberonia aporophylla Rchb. fil. in Bonpl. III. 223: aff. O. ancipiti: foliis triangulis margine superiori prope rectilineis, parte subdimidia libere ascendente, spica subverticillata, bracteis ovatis apice ciliatuloerosulis, pluribus in inflorescentiae parte inferiori congestis fatuis. Summus character nobis videtur positus in foliorum ratione, quae in affinibus ancipitibus Lindl., brevifolia Lindl. valde diversa. In O. ancipiti (e. g. Cuming 2115) folii apex adhuc latus, margo inferior valde extrorsum curvatus; apex ipse obtuse acutus, inaequalis —, spica aequalis densa more O. iridifoliae Lindl. — In O. brevifolia lamina libera bene longior, nervoso striata, dum in nostra corrugata. — O. imbricata Lindl. — saltem illa, quam habet Ill. Wight (1629), ab ancipiti Lindl. vix recedit. — Folia in nostra subsemipollicaria. Racemus bipollicaris. Bracteae vaginaeque oblongae apice denticulatae ovaria aequantes. Sepala oblongolanceolata. Tepala ligulata basi dilatata. Labellum panduratum, apice emarginatum, lateribus denticulatis. 2113. Cuming. Phil.

33. **MALAXIS ANCEPS.** Huc l. c.: *Oberonia anceps* (Lindl. Sertum Orch. sub. t. 8; O. imbricata, Wight, ic. 1629 non Blumei; O. Griffithii, Wight, 1 c.); bracteis subrotundo-ovatis denticulatis, petalis serrulatis acutis sepalis aequalibus, labello subrotundo breve sagittato emarginato — Philippinnes, Cuming; Burma, Griffith. 1097; Malacca, Griffith, according to Wight, h. s. sp. — Leaves broad, blunt, slightly curved inwards, projecting very little beyond each other. Spikes short, extremely dense. Capsules very small, globose, absolutely sessile. Huc porro:

Oberonia imbricata? Blume. Wight. Ic, V. I. t. 1629. (1851): „stem simple, leafy, leaves compressed, sheathing, closely imbricated, limb of the lip ligulate, denticulate." Blume. Malacca Griffith. — The leaves correspend well with the above too brief and imperfect character, but scarcely the lip, wich is my reason for attaching the mark of doubt to the species. Should it be found not to be Blumes plant, it might then be called —

Oberonia Griffithii R. W.: stem leafy, leaves imbricating: spike slender, drooping, bracts large, sheathing, broad ovate, denticulate: sepals broad ovate denticulate; sepals broad ovate, obtuse, as long as the ovate lanceolate petals: lip broad, linear, obtuse, emarginate. The dissections of the flowers are taken from some obtained from a very young spike, the older spike shown in the plate is in fruit.

34. **MALAXIS MINIATA.** Huc l. c.: *Oberonia miniata* (Lindl. in Bot. Reg. 1843, misc. 8); bracteis ovato-lanceolatis acuminatis, petalis integris obtusis sepalis erectis brevioribus, labello carnoso basi dilatato concavo in laminam linearem emarginatam producto. — Singapore, Loddiges, Philippines, Cuming, h. s. sp. and v. v. c. — Leaves broad falcate acute, four or five on a side. Spikes long, slender, thin-flowered, drooping. Pedicels hairy. Flowers orange-coloured.

35. **MALAXIS MICROPHYLLA.** Huc l. c.: *Oberonia microphylla* (L. O. 17, Rchb. fil. in Bonpl., March 1, 1857); „subcaulescens, foliis paucis angusto-ensiformibus basi vaginatis subincurvis, petalis erosis, labelli limbo producto rotundato emarginato" — Java, Blume (on the higher parts of M. Salak) — M. Rchb. who saw this species, adds nothing to the brief character given by Blume.

36. **MALAXIS BREVIFOLIA.** Huc l. c.: *Oberonia brevifolia* (L. O. 16, Cymbidium equitans, Thouars, t. 92. Pleurothallis disticha, Ach. Rich. Orch. Maurit. t. 8, f. 1, Ad. Brong. Voy. Coquille, t. 40); bracteis linearibus acuminatis margine asperis, petalis sepalisq. glabris, labello subhastato apice dilatato dentato — Mauritius. Bouton, Thouars, Richard, h. s. sp. — Leaves lanceolate, acute, nearly straight. Spikes long, drooping, very slender.

37. **MALAXIS GLANDULOSA.** Huc l. c.: *Oberonia glandulosa*: bracteis setaceis margine scabris, petalis sepalis hispidis minoribus, labello apice latiore subdentato — Otaheite, Kartalsky (Prescott); Mathews (on branches of trees, 158) h. s. sp. — This is probably the Epidendrum equitans of Forster, rather than O. brevifolia, from which it is distinguished, inter alia, by its longer straighter leaves and hispid flowers. The latter appear to be pale yellow.

38. **MALAXIS SPATHULATA.** Huc l. c.: *Oberonia spathulata* (L. O. 16, Malaxis equitans, Blume, Bijdr. 395); bracteis concavis floribusq. hispidis, petalis sepalis brevioribus, labello basi rotundato medio constricto apice in laminam denticulatam subrotundam expanso — Java, Lobb, h. s. sp. — Leaves like those of O. brevifolia. Flowers very small, green, somewhat verticillate. The hispidity of the flowers is very striking. It agrees well enough with Blume's short definition.

** *Labello bifido.*

39. **MALAXIS CAULESCENS.** Huc l. c.: *Oberonia caulesceus* (L. O. 15); petalis linearibus, labello elongato cuneato bilobo basi carnoso utrinque dentato — Nepal, Wallich; Khasya at 4000—5000′, J. D. Hooker and T. Thomson, h. s. sp. — Leaves grassy, distant. Spikes very slender, thin flowered, naked at the base. Flowers slightly whorled.

40. **MALAXIS SPIRALIS.** Huc l. c.: *Oberonia spiralis*; petalis ovatis integris sepalis subaequalibus, labello brevi cuneato bifido integerrimo — Java, Kuhl and Hasselt. — Of this apparently very distinct species I have only seen a sketch for which I am indebted to Prof. Reichenbach. The leaves are straight, blunt, 4—5 on each side, about 2‴ × 5‴. The spike is erect, 4 inches long, with distant perfect spires of minute flowers, which are represented as being smooth. The lip is broader at the end than it is deep, and divided less than halfway down.

*** *Labello tri-quadrifido.*

NB. All these species have narrow grassy leaves, and might be almost placed among ACAULES.

41. **MALAXIS ANTHROPOPHORA.** Huc l. c.: *Oberonia anthropophora* (L. O. 16); bracteis ovatis subdenticulatis, petalis linearibus integerrimis, labello elongato quadrifido laciniis lateralibus brevibus carnosis falcatis, intermediis setaceis divergentibus — Tavoy, Wallich, h. s. sp. — In foliage this resembles O. angustifolia, Nr. 29; but has even less tendence to lengthen its stem. The leaves are about 2 on a side, 1½″ × 1½‴. The spikes are 4″ long, dense at the base, open and nearly flowerless at the point, with a naked terete peduncle rather more than ½″ long.

42. **MALAXIS PUMILIO.** Huc l. c.: *Oberonia pumilio* (Rchb. fil. in Bonpl., March 1, 1857); bracteis lineari-subulatis floribus aequalibus, petalis ovatis acutis hinc lobulatis crenatis erosis, labello pandurato lobis posticis ligulatis antice obreniformi c. apiculo — Java, Rchb. fil —„Allied to O. microphylla. Leaves equitant, linear ligulate acute, 4 on each side. Raceme long, interrupted, somewhat whorled. Sepals and petals green. Lip vermilion". Seems to differ from the next in the ligulate side lobes of the lip, its broader central piece, eroded petals; and shorter bracts.

43. **MALAXIS OBCORDATA.** Huc l. c.: *Oberonia obcordata;* bracteis setaceis floribus longioribus, petalis linearibus acuminatis integerrimis, labelli tripartiti basi bicarinati lobo medio obcordato, lateralibus angustis lanceolatis brevioribus — Sikkim, J.D. Hooker and T. Thomson (at 2000', 112); Griffith (Darjeeling); Khasya, Griffith (Myrung, h. s. sp. — A small, slightly caulescent species, with the foliage of O. anthropophora,) Nr. 41. Spikes verticillate. Flowers deep rose colour (Hooker), or orange coloured (Griffith). The Sikkim specimens are leafy at the base of the spikes in consequence of the elongation of the stem; those from Khasya are much less evidently so.

44. **MALAXIS CIMICINA.** Huc l. c.: *Oberonia cimicina* (Griffith, Not. III. 275); bracteis lineari-lanceolatis subintegris, petalis oblongis denticulatis sepalis obtusis aequalibus, labelli 4-lobi scabri lobis lateralibus inaequaliter multifidis intermedio elongato acute bipartito. — Martaban, Griffith (Moulmein, in damp places on Lagerströmia); Tenasserim, Id. (Mergui, 772), h. s. sp. — Another grassy leaved species resembling O. anthropophora, Nr. 41. Spikes long, slender, erect, somewhat verticillate. „Sepals and petals pale, streaked with brown. Lip darker," Griffith.

45 **MALAXIS LOBBIANA.** Huc l. c.: *Oberonia Lobbiana;* bracteis minutis subdentatis ovario brevioribus, petalis filiformibus sepalis ovalibus aequalibus, labelli lobis lateralibus rotundatis intermedio quadrato bidentato — Borneo, Lobb, h. s. sp. — A very small species. Scarcely caulescent. Leaves 1 or 2 on each side, thin, blunt. Flowers very minute, apparently yellow, in erect spikes rising much above the leaves.

46. **MALAXIS SIMILIS** Blume Bijdr. 394. Huc l. c.: *Oberonia similis* (L. O. 17): „foliis paucis ensiformibus basi vaginatis subrectis, labelli limbo semitrifido eroso, lobo medio elongato bifido, capsulis obovatis globosis" — Java, Blume (on the trees of M. Salak) — One of Kuhl and Hasselt's sketches, Nr. 37, possibly belongs to this plant, with which it agrees in every thing mentioned except having an eroded lip. The figure shows a linear lip without any trace of erosion, bidentate at point, with a short acute falcate lobe near the base on each side.

47. **MALAXIS TITANIA.** Huc l. c.: *Oberonia Titania* (Titania miniata Endl. Fl. Norf. p. 31); Norfolk Island, Ferd. Bauer — Evidently some species of this section.

The following are insufficiently known.

48. **OBERONIA SPIRALIS**, Griffith, Not. III. 275.

49. **OBERONIA TRILOBATA**, Ib. 273. A plant found on trees near Nowgong in the Khasya hills, with leaves a foot and more long. It seems to belong to the Acaules, and has a clavate spike longer than the leaves themselves, dense brownish yellow flowers, sunk in oblong excavations of the axis! and a flat 3-lobed lip with the lateral lobes rounded and resembling the petals; while the terminal one is broadly obcordate with a deepish denticulate sinus. Is it an Oberonia at all? notwithstanding Griffith's comparison of it to O. iridifolia.

50. OBERONIA, 120; from the hills and plains of Behar, J. D. Hooker.

51. OBERONIA, from the Brisbane River in New Holland; F. Müller.

52. **OBERONIA MYOSURUS**, L. O. 16, said to be found both in Nepal and the Society Islands. Flowers unknown. Requires re-examination, but evidently a very distinct species among the ACAULES.

53. MALAXIS QUERCI, De Vriese, ic. 258; a small stemless species with purplish brown verticillate flowers. Structure unknown.

The following are to be excluded from the genus.

54. OBERONIA LINDLEYANA, Ad. Brongn. Voyage de la Coquille, t. 40, is probably Adenoncos virens as Rchb. fil. has suggested.

55. OBERONIA GLADIATA, A. Richard in Sert. Astrol. t. 2, } appear to be Phreatia, another suggestion of the learned Leipsig botanist.
56. OBERONIA MICRANTHA, ib., t. 3, }

1338. NEPHELAPHYLLUM Bl.

(Bijdr. 372. Tabellen 72.)

1. NEPHELAPHYLLUM TENUIFLORUM Bl. De Vriese Illustr. t. 12. f. 3.

Obs. 1. Nephelaphylli genus ad Epidendreas pertinet!

Obs. 2. Nephelaphyllum a Lindleyo et a me ex icone tam passima, quam falsissima Blumeana felicissime recognitum. Non satis mirandum, Blumeum in libro novo, quo icones illustrationibus suis edit, aliorum icones urgere, dum ipse imagines protulit, quibus falsius quid nemo reperiet.

1339. CORALLORHIZA Hall.

(Hist. 2. 159. — Walp. Ann. III. 586.)

1. CORALLORHIZA MACRAEI Gray Manual 458 (1856!). Plant purplish, stout (6′—16′ high), bearing 15—20 large flowers in a crowded spike, on very short pedicels; lip oval, very obtuse, rather fleshy (purple), 3 nerved, perfectly entire, concave, the margins incurved, the sessile base obscurely auricled and with 1—3 short lamellae; spur none at all; pod ovoid (½′ long). — Woods, along Lakes Huron and Superior (Mackinaw C. G. Loring, Tr. Whitney etc., West Canada, W. F. Macrae). — Sepals and petals 6″—8″ long, conspicuously 3 nerved; but this cannot be C. striata, Lindl., which is said to have a three lobed and acute lip etc. Flowers the largest of the genus.

1340. LIPARIS L. C. Rich.

(Rich. Orch. Eur. 30. f. 10. — Walp. Ann. II. 527.)

Obs. Lubenter Sturmiae nomen postpono. Etenim nomina haud cognitissima (e. gr. Equus, Bos, Elephas, Scorpio, Tinea) certe in utroque regno organico adhiberi posse nunc quidem omnes sentire debemus, ubi neutrum regnum uni homini bene cognitum.

Sect. I. STURMIA: folia plicata.

1. LIPARIS ODORATA Lindl. Orch. 26. Cf. Hooker Journ. of Bot. VII. Lindl. in Benth. Flor. Hongk. p. 33: „very near L. nervosa, but the column has an even, not an acutely toothed margin, the sepals are oblong and very fleshy, the flowers also appear to be whole coloured and green. It is the same as the plant found in Chi-Kiang by Fortune.

*2. LIPARIS NERVOSA Lindl. Orch. p. 26. — Rchb. fil. in Bonpl. III. 250 (sub Sturmia). Planta spithamaea. Folia tria lanceolata acuminata bene plicata. Pedunculus elongatus angulatus apice distanti racemosus. Bracteae acuminatae ovariis pedicellatis subbreviores. Sepala lateralia semiovata acuta; sepalum dorsale lineare acutum. Tepala linearia acuta. Labellum flabellatum apice obtusangulum, retusum, cum apiculo, margine hinc subtiliter crenulatum; falculae geminae ante basin. Gynostemium supra labelli basin adnatum ab apice membrane hinc denticulata medium versus alatum. Hongkong. Hance!

3. LIPARIS BITUBERCULATA Lindl. Bot. 882. Rchb. fil. in Bonpl. II. 22. (sub Sturmia). Caracas Wagener.

4. LIPARIS WAGENERI Rchb. fil. in Bonpl. III. 73. (sub Sturmia): aff. Liparidi ramosae Pöpp. pedunculo validiori omnino et ubique exalato, ovariis pedicellatis bracteis suis ter brevioribus, labello cuneato flabellato. Terrestris serpens. Folia plantaginea gemina sub pedunculo, petiolis laminae aequalibus seu brevioribus, lamina ovalis acuta basi cuneato rotundata. Pedunculus spithamaeus, dimidio superiore racemosus. Sepala et tepala angustiora linearia. Bracteae anguste triangulae. „Flores albi, folia violacea." — Blüthe von der Grösse derer der Sturmia liliifolia (Liparis liliifolia Rich.). Die ganze Pflanze viel kräftiger als ramosa, es fehlt auch der dünne Hautrand um die Blätter. Diese unterhalb violett, Blüthen weiss. — Ocanna. 5000'. März. Wagener.

5. LIPARIS BILOBA R. Wight. Ic. VI. 1683. 1851: leaves 2 or 3, ovate, acute, undulate, plicate, cucullate: raceme erect, few flowered: sepals ovate, acute: petals narrow linear, blunt pointed, lip spreading deeply 2 lobed. Flowers dull plumb colour. — Neilgherries, nestling among moss on the branches of trees, flowering in July and August. Flowers longish pedicelled, in proportion to the rest of the plant. It comes very near L. atropurpurea, but the deeply 2 lobed lip keeps it distinct.

6. LIPARIS ELLIPTICA Rchb. fil. Linnaea XXII. 833 (sub Sturmia). — Rchb. fil. Bonpl. II. 22. Caracas. Wagener.

7. LIPARIS KAPPLERI Rchb. fil.: huc Sturmia Kappleri. Rchb. fil. l. c.

8. LIPARIS PARADOXA Rchb. fil. Huc: Empusa paradoxa Lindl. B. Reg. 825.

Sect. II. CESTICHIS: folia pergamenea.

9. LIPARIS WIGHTII. Huc L. elliptica R. Wight. Ic. V. 1735 (1851): pseudobulbs oval, compressed, costate on one side, 2 edged, truncated at the apex, two leaved: leaves elliptic, cuspidate, nerved, subplicate, about half the length of the scape: scape suberect, raceme many flowered: bracts ovate, subulate, about the length of ovary: sepals subequal, ovato elliptic, cuspidate, petals narrow, linear, pointed: lip irregularly 8 lobed: lobes undulated, pointed, the middle one larger. Flowers greenish yellow, approaching to straw colour. — Branches of trees about Coocroor, Neilgherries. Aug. — Oct. — Allied to L. viridiflora of Ceylon. The pseudobulbs are naked, fleshy, costate on one side, two edged i. e. tapering off towards each side. Figur 10 is a transverse section of a pseudobulb.

10. LIPARIS LONGIPES Lindl. Orch. 30. Rchb. fil. in Bonpl. III. 150 (sub Sturmia) Hongkong. Seemann. — Lindl. in Hook. Journ. VII. l. c.: Hongkong in clefts of rocks in the spring of the year. Champion. The species is common all over those parts of Asia, wich produce epiphytes.

1341. DENDROCHILUM *Bl.*

(Bijdr. 398. Tabellen 522). — Walp. Ann. I. 775.)

1. DENDROCHILUM GLUMACEUM Lindl. B. M. 1853.

Obs. 1. Dendrochilum roseum Dalzell cf. sub Dendrobiis.

Obs. 2. Totum Dendrochili genus est Epidendrearum ut sequentia.

1343. COELIA *Lindl.*

(Orch. 36. — Walp. Ann. III. 527.)

1. COELIA MACROSTACHYA Lindl. Orch. 36. B. M. 4712. Van Houtte IX et Obs.

2. COELIA BELLA. Huc: *Bifrenaria bella* Lem. — Lem. jard. fl. III. tab. 325. — Pseudobulbis jun. ovatis subcompressis, adultis tereti oblongo-ovatis b. radicali annulatim subattenuatis, f. junioribus radicalibus breviter squamaeformibus vaginantibus

bifariis deinde terminalib. 4—5 bifariis quoque longe convoluto - vaginatis cartilagineis crassis ensiformibus longe acuminatis et subpungentibus plicato - 3—5 - venaus; scapo trifloro (vel amplius) brevi basi bifariam vaginatim bracteata, segmentis floris crassis, lateralibus externis in mentum perlongum antice basi gibbosum bracteolis obductum productis, bracteolis oblongo - oblique - dimidiatis, labello basi producta cavitate cucullata magna donata trilobo oblongo lobis lateralibus brevibus quadratis, terminali linguiformi acuto calloque carnoso luteo elevato penitus occupato, de fossa ad callum costa elevata notato. — Lem. ad vivum.

Bifr. bella Lem. sub praes. tab. — (*Bothriochilus bellus* Lem., an genus novum?)

Primus coluit Ambr. Verschaffelt.

Huc porro: Lem. Illustration horticole III. p. 30: *Bothriochilus bellus* Ch. Lem. (Orchidaceae § Vandeae §§ Maxillariae). Nous avons publié, dans le troisième volume de notre Jardin fleuriste (Pl. 325), sous le nom de Bifrenaria bella, une rare et jolie Orchidée, que nous venions d'observer en fleurs dans une des serres spéciales pour la culture de ces plantes de l'établissement Verschaffelt, et qui provenait des recherches faites par son collecteur, M. F. Devos, dans l'île St.-Catherine. Tout en la rapportant au genre Bifrenaria, nous fesions nos réserves, en raison du nombre des pollinies de notre plante, qui en montrent quatre doubles, c'est-à-dire huit! Nous induisions de ce fait insolite, que notre plante pourrait fort bien devenir le type d'un nouveau genre, que nous proposames dès lors sous le nom de Bothriochilus. M. Reichenbach, fils, qui s'occupe avec un zèle infatigable et un talent supérieur, auquel, tout le premier, nous rendons hommage, de la révision et de la classification des plantes de cette famille, approuva (in litt.) la formation de ce genre, si la disposition des pollinies était telle que nous l'avions figurée dans notre planche!

Or, en décembre dernier, notre ancien Bifrenaria bella vient de refleurir dans l'établissiment Vetschaffelt, avec une grande luxuriance; chaque épi offrait six et sept fleurs à la fois, et nous avons pu de nouveau constater l'existence de quatre pollinies doubles. En conséquence, nous proposons ici définitivement le genre Bothriochilus *) qui ne renfermerait encore que l'espèce en question.

Rappelons en peu de mots que les fleurs en sont grandes (0,07 de long. 0,05 de diam.), nettement tricolores (blanc, rose, jaune!) et émettent une odeur extrêmement suave. Nous souhaitons fort que M. A. Verschaffelt puisse promptement multiplier cette plante et la répandre dans les collections.

Obs. Species jam diu in Anglia apud cl. Bateman floruit, uti in herbario Lindleyano vidi.

3. **COELIA GUATEMALENSIS**: foliis lanceis, pedunculo dense vaginato, bracteis flores non aequantibus, sacco mentali ovarii dimidium aequante seu superante, labello rhombeo - lanceo. Guatemala (v. sp. sicc. in herb. Lindleyano).

*) Perigonii segmentis subconformibus inaequalibus subcarnosis de medio ad basim tubulatim conniventibus dein subpatulis lanceolatis subobtusis; supremo (externo) subfornicato multo brevius ad pedicellum (ovarium) abrupte terminato: lateralibus 2 (internis) postice longissime cum ovario parallelis productis labelli basim obvolventibus cum gynostemio de medio ad basim in alas comitanter connatis in calcar grossum obtusumque ventre canaliculatum desinentibus; labelli basi prolongata abrupte retro plicata alte cucullata (inde nomen); laminae ejus oblongae canaliculatae lobis lateralibus brevibus truncatim quadratis, terminali linguiformi acuto convexo callo maximo elevato discolore fere in totum occupato; gynostemio late cuneato apice in tres grossos dentes fisso; pollinium paribus quatuor geminatis, paribus super. majoribus, caudiculis parium duorum distinctis.

Bothriochilus Nob. hic et antea l. c.

Species adhuc unica observata (V. supra l. c.) floribus 6—7 (an amplius?) dense breviterque *spicatis* tricoloribus suaveolentibus, unoquoque bractea maxima scariosa cito desiccata de basi ad medium involuto .... etc. V. supra.

Bothriochilus bellus Nob. etc.

1346. EARINA *Lindl.*

B. Reg. XXI. 1835 sub 1999.

A. Lindleyana et W. J. Hookeriana.

Bot. Reg. l. c.: EARINA (ἐάρινος). Sepala erecta, aequalia, acuta, membranacea, carinata. Petala carnosa, obtusata. Labellum carnosum, posticum, cucullatum, trilobum, disco nudo, cum columna continuum et subparallelum. Columna teres, nana, stigmatis obliqui labio inferiore prominulo. Clinandrium proclive. Anthera bilocularis. Pollinia 4, per paria cohaerentia, collateralia. Herba caulescens, rhizomate articulato-repente. Folia linearia, disticha, vaginantia. Flores parvi, paniculati, bracteis cartilagineis, striatis, cucullatis („auriculatis" Hook. Ic. V, 631.) Lindl. B. M. Comp. II. 24. 377. — Malaxidea related to Coelogyne and Dilochia, of the latter of which in particular it has much the habits on a small scale. From the former its wingless column and from the latter the number of its pollermasses, sufficiently distinguish it, independly of other points of difference.

1. EARINA MUCRONATA Lindl. in Bot. Reg. XXI. 1835 sub 1999: Epidendrum autumnale Forst. Prodr. n. 319. Cymbidium autumnale Sw. nov. act. ups. 672. — W. Sp. pl. III. 98. — Nova Zelandia (hab. s. sp. comm. cel. Cunningh). — Rhizomata inter muscos mortuos repentia, articulata. Caules ascendentes, palmares pedalesque, pennae corvinae crassitudine, maculati, basi vestigiis laceris vaginarum vestiti. Folia lineari-ensiformia, apice leviter obliqua, mucronulata. Flores e bracteis rigidis cucullatis mucronatis emergentes, parvi, ovario recto costato bracteolarum longitudine. Sepala omnia libera, angusta, mucronata, carinulata. Petala latiora, carnosa, obtusiora, aequilonga. Labellum posticum carnosum, cucullatum, inappendiculatum, basi liberum, cum columna continuum et parallelum, trilobum, nudum; lobo intermedio bipartito laciniis oblongis crenulatis mucrone intermedio. Columna suberecta nana, antice teres, clinandrio subcucullato membranaceo-marginato; stigmate excavato, rostello obtuso. Anthera ovata, 2 locularis. Pollinia 4, per paria cohaerentia, cereacea, collateralia, materie viscida rostello adhaerentia.

Growing commonly in moist woods upon the shores of the Bay of Islands, New Zeeland, on mossy rocky banks and on the limbs of trees, flowering in Sept. Oct., which in New Zeeland is the season of spring. Mr. Cunningham.

Bot Mag. Comp. II. 376: A. Rich. Fel. Nov. Zel. p. 160. — New Zealand North. Island) 1769. Sir Joseph Banks. Moist woods, on rocks and trees, Bay of Islands, Wangarea etc. 1826. A. Cunningham 1834. — R. Cunningham (Middle Island) Dusky Bay 1773. G. Forster.

All. Cunningh. in Hook. Journ Bot. III. 300. 1841: Beyond the trunks of the larger trees to my joy a charming plant of E. m., with very narrow elongated leaves bearing white flowers, which were however beyond my reach, but of which I shall secure plants on my return again to the colony. New Zeeland up the Wyeaddy river.

Hook. Ic. V, 432. 1842.

2. EARINA SUAVEOLENS Lindl. Bot. Reg. XXIX. 1843. Misc. 88. Spica oblonga densa basi subcomposita, labello transverso, rhombeo, versus basin bicalloso obsolete trilobo lacinia intermedia rotundata undulata emarginata.

New Zealand. Bidwill Loddiges. A tufted species with stems 4—12" high, clothed with narrow distichous somewhat rigid leaves about 3" long. The stems are terminated by dense oblong spikes of white flowers, having a double spot on the lip.

It grows near Roturoa in New Zeeland on trees not very densely covered with leaves. Very rare; exceedingly beautiful, most deliciously perfumed. From E. mucronata it differs in the form of the lip and the size of the flowers, which are collected in dense spikes, and not in slender branched ones.

B. J. Hookeriana. Fl. of New Zeeland, 239.

Earina Lindl. Perianthii foliola patentia, carnosa, subaequalia. Labellum posticum, cucullatum, trilobum, columnae subparallelum, basi subtuberculatum, disco nudo. Columna nana, stigmatis labio inferiore prominulo. Anthera bilocularis. Pollinia 4 cerasea, collateralia, per paria cohaerentia. — Herbae epiphytae, caulescentes; rhizomate articulato, repente; foliis rigidis, distichis; floribus racemosis paniculatisve; bracteis cucullatis. — Rigid epiphytical plants, growing in great tufts on the branches of trees etc. Rhizome creeping, sending out long white simple fleshy or hard roots. Stems compressed, single, erect, covered with distichous, linear, coriaceous green leaves. *Flowers* in terminal simple or branched bracteate racemes, small, white. Perianth of six nearly equal pieces, all spreading; sepals equal, oblong, subacute; petals ovate, more fleshy, blunt; lip three lobed, retuse, lateral lobes curved inwards. Column short. Pollen masses four, united, in pairs, to a very small strap shaped caudicle, powdery. — This genus is confined to New *Zealand*. (Name from ἐαρινος, spring flowering.)

1. EARINA MUCRONATA Lindl.: caule gracili ancipiti, foliis longe lineari-ligulatis acuminatis, panicula gracili, sepalis lineari-oblongis, labello profunde trilobo. Lindl. Gen. et Sp. Orchid. A. Cunn. Prodr. Epidendrum mucronatum Banks et Sol. MSS. et Ic.

   Hab. Throughout the Islands, as far south ac Otago. Banks et Solander etc. Stems slender, 1 — 3 feet long, two edged. Leaves 4 — 6 inches long, 1/4 broad, acuminate. Panicle slender, sparingly branched. Bracts remote, obtuse. Flowers 1/4 inch diameter; sepals and petals linear oblong; labellum deeply lobed, spotted.

2. EARINA AUTUMNALIS Hook. fil.; caule robusto lente compresso, foliis linearibus rigidis subacutis acuminatisve panicula subdisticha ramosa, sepalis late oblongis, petalis late ovatis, labello obtuse trilobo subquadrato. Epidendrum autumnale Banks et Sol. MSS. et Ic.

   Hab. Throughout the Islands, to Stewarts Islands, Banks et Solander etc.

   A shorter, more robust plant than E. mucronata. Stem 1 1/2 foot high, slightly compressed. Leaves 2 1/2 — 3 1/2 inches longs, 1/3 broad, rigid, nerved and striated, sharp or acuminate. Panicle rigid, rarely simple, usually with many diverging many flowered distichous branches. Bracts crowded, imbricated. Flowers white, speckled. Sepals broadly oblong. Petals ovate. Labellum broad, obscurely three lobed, retuse.

Obs. Ex illis, quae attuli, apparet, cl. Hooker fil. et Lindley de „Epidendro autumnali" Forsteri (Florul. ins. austr. Prodr. auct. Georgo Forster p. 60) dissentire. Ex descriptione praecedentis, Epidendri biflori, apparet, cl. Forster bene discernere folia lineari-lanceolata et lanceolata, ex 323, Epidendro Clypeolo apparet, eundem bene discernere labellum apice emarginatum, dum in 319 retusum dicitur. Cum jam folia linearia et labellum emarginatum in Earina mucronata, folia linenari-lanceolata, et labellum apice retusum, in Earina suaveolenti occurrant, patet, cl. Hooker fil. hence Kerinam autumnalem dixisse illam plantam, quam cl. Lindley suaveolentem dixit.

Quod autem attinet ad characteres Earinae, totum genus Coelogyni certe valde affine. Columnam tamen habet Liparidis, ea tamen lege, ut margo androclinii utrinque descendat in lineam, ex qua surgit parva auricula. Pollinia in E. autumnali reperio quaterna et in unum fasciculum conferruminata apiculo pulvereo; in E. mucronata autem tela illa non apiculata, sed laxior. Haec omnia non bene sufficiunt. Anthera autem sat videtur egregia ad condendum genus. Loculamenta enim septulum habent, quod prope rectangule imminet in septa loculorum. Pollinia inde minime collateralia! Quod autem majus, utrinque extus juxta septulum emergit uncus parvus. Haec si colligis, genus servari potest. Characteres hucdum nemo dederat.

1347. COELOGYNE Lindl. Folia I. V.:
(Gen. et Sp. Orch. 38.)

Sepala conniventia vel patentia, libera, (nunc invicem agglutinata) aequalia, petaloidea, saepius basi obtusa. Petala conformia, aut multo angustiora. Labellum cucullatum, trilobum vel indivisum, petaloideum, basi saepe saccatum, venis 2—3 pluribusve parallelis cristatis; nunc cum basi columnae connatum. Columna erecta, libera, alata, apice membranaceo-marginata. Stigma prominens, alte excavatum, bilabiatum. Pollinia 4, libera, incumbentia, materie granulosa cohaerentia. Anthera infra apicem columnae inserta, mobilis, vix decidua.

Herbae epiphytae vel terrestres Asiae tropicae, pseudobulbosae. Folia 1—2, nervosa. Racemi, aut flores solitarii, terminales, saepe e squamis corneis erumpentes. Flores albi, rosei, flavidi aut brunneo maculati, immo virescentes, saepissime speciosi.

ANALYSIS OF THE SECTIONS.

§ 1. NEOGYNE. Flowers closed. Sepals carinate, saccate. Lip bisaccate.
§ 2. COELOGYNE. Flowers expanded. Lip unisaccate.
1. *Flaccidae.* Racemes pendulous.
2. *Erectae.* Racemes erect, simple. Petals similar to the sepals.
3. *Proliferae.* Racemes emerging from imbricated scales immediately below the flowers, and proliferous.
4. *Filiferae.* Racemes erect, simple, or flowers solitary. Petals filiform.
5. *Flexuosae.* Racemes erect, very flexuose, finally naked, with adpressed floriferous bracts at the point.

§ 3. PLEIPNE. Flowers large, membranous, appearing before or after the plaited leaves which are membranous and quickly perishable.

§ 1. NEOGYNE. Rchb. fil., in Bot. Zeit., 1852. 931.

1. COELOGYNE GARDNERIANA Lindl., in Wall. Pl. as. rar., I, 33, t. 38, LO., n. 9. Folia I. n. 1.:

C. pseudobulbis elongatis ampullaceis teretibus, foliis lanceolatis 5-nerviis acuminatis longe petiolatis, racemis nutantibus densifloris terminalibus radicalibusque foliis multo brevioribus, bracteis latis oblongis cucullatis sterilibus carnosis, floriferis petaloideis persistentibus, floribus clausis, sepalis oblongis carinatis basi saccatis, petalis lineari-oblongis, labelli denticulati basi bisaccati lobo medio bilobo lateralibus minore, crista duplici flexuosa infra medium evanescente.

C. trisaccata Griffith, itin. notes, p. 72.

Wild in Nepal Wallich; Khasia at Mamloo in woods Griffith; at the height of 4000 feet. J. D. Hooker, and T. Thomson, (v. v. c. et s. sp.). — This noble plant has large pure white flowers, with a yellowish stain at the end of the lip; they scarcely ever expand, but are placed in long nodding racemes, supported by great fleshy snow-white bracts. The pseudobulbs are very long, and narrow, resembling long flasks. The leaves are as much as eighteen inches long, by three inches broad. The saccate base of the sepals is very remarkable, but hardly enough for the establishment of a new genus.

Huc: Rchb. fil. l. c. *Neogyna.* Ovarium cylindraceum, trialatum. Perigonium carnoso-membranaceum, campanulatum, apice vix apertum, phylla externa oblongo-ligulata linea media carinata, acuta, basi saccata, phyllum summum altius in ovario insertum, quam phylla lateralia, phylla l. i. breviora, linearia, acuta, sub apice dilatata; labellum oblongum, apice trilobum, lobis lateralibus obtusangulis, lobo medio producto, subquadrato, longiori, margine antico denticulato, basi ima conico-sacca-

tum, cum pede gynostemii continuum, marginibus elevatis canalem efformans; nervi 2 laterales interni lamellas crenulatas, crispulas gerentes; gynostemium semiteres sub apice postice gibbum, marginibus apicem versus obtusangule alatum, ala andrœclinium omnino cingens, denticulata, rostellum triangulum, supra stigmatis foveam rotundam, inferne limbigeram; anthera oblonga, dorso valde elevata, bilocularis, loculi obscure bilocellati; pollinia quaterna, oblongo-pyriformia, depressa, postice linea media sulcato-exsecta, transsectione igitur convoluta (nec farcta Coelogynarum more), per paria incumbentia, sessilia in glandula pulverea. — Blüthe schön weiss, 3 Zoll lang. Lippenspitze gelb. Coelogyne Gardneriana Hort. Booth. num Lindl.? Im letzten Falle wäre die Abbildung in Wall. Pl. As. ganz flüchtig. — Allein ich glaube durchaus nicht daran und würde die Pflanze unbedenklich als C. trisaccata Griff. bestimmen, wenn das wichtige Moment des ovarium trialatum nicht unerwähnt geblieben wäre.

§ 2. COELOGYNAE VERAE.

1. *Flaccidae.*

This section is known by the long pendulous racemes. C. incrassata, No. 28, may possibly belong here.

2. COELOGYNE FLACCIDA LO., n. 1. Bot. Mag., t. 3318. Bot. Reg. 1852, t. 31. Fol. I. n. 2:

C. pseudobulbis oblongis angulatis squamis coriaceis ustulatis vestitis, foliis lanceolatis vel oblongo-lanceolatis longe petiolatis coriaceis, racemo flexuoso nutante, bracteis deciduis, petalis lineari-lanceolatis, labello ovato trilobo: lineis tribus elevatis flexuosis: lobo medio ovato duplo angustiore basi denticulato.

Wild in Nepal; near Noakote, on trees. Wallich, (v. v. c. et s. sp.). — Flowers in long drooping racemes, with a peculiar and disagreeable odour. Bracts soon thrown off leaving the flowers naked. Sepals white, linear oblong, scarcely acute. Petals of the same colour, but not more than one-third the breadth, and curved backwards. Lip channelled, ovate, three-lobed, with the middle lobe ovate, acute, wavy, toothed at the base, and turned back at the point; near its base are several crimson veins; towards the apex it is yellow in the centre; along the middle run three raised wavy lines which terminate abruptly a little within the base of the middle lobe. The scales at the base of the raceme are remarkable for their brown scorched appearance.

3. COELOGYNE ROCHUSSENII De Vr. Illustr. t. 2. et tab. 11. fig. 6: „pseudobulbis ovatis vel oblongis, angulatis, sulcatis, diphyllis; foliis ellipticis, lanceolatis vel oblongo-lanceolatis, petiolatis, coriaceis, racemo longissimo, flexuoso, pendulo; bracteis ovatis, conduplicatis, persistentibus persicinis; floribus pedicellatis, pendulis; sepalis lineari-lanceolatis, carinatis, acuminatis; petalis minoribus, basi angustatis, lobis acutis, medio maximo elongato, lineis tribus elevatis, muricatis, denticulatis praedito; massarum pollinicarum facie interna planiuscula, ad punctum conjunctionis paululum excavata; antherae margine denticulato." Eine sehr stattliche Pflanze, die wir bereits längere Zeit als neu im Herbar liegen hatten.

4. COELOGYNE TESTACEA Lindley, in Bot. Reg. 1842, misc. 34. Folia I. n. 3.:

C. pseudobulbis ovalibus angustis angulatis, foliis lanceolatis 3-nerviis, racemo pendulo, bracteis ovatis cucullatis ovarii longitudine persistentibus, sepalis petalisque subaequalibus, labelli oblongi lobis lateralibus rotundatis obsoletis intermedio obtuso: venis 4 ad apicem usque papilloso-cristatis.

Wild in Sincapore Loddiges, (v. v. c.). — Leaves lanceolate, nine inches long, distinctly petiolate. Flowers not larger than in C. fimbriata, in drooping racemes five to six inches long, dirty white with fulvous bracts and some brown blotches on the lip. — Huc B. Mag. 4785.

5. COELOGYNE PLANTAGINEA Lindl. in Gard. Chronicle 1855. 20.

C. pseudobulbis elongatis teretibus, foliis oblongo-lanceolatis costa-

tis, undulatis, petiolatis patentibus, racemo pendulo glabro multifloro, bracteis „parvis fuscis acutissimis" deciduis, petalis lineari lanceolatis, sepalis paulo latioribus carinatis, labello ovato oblongo trilobo lamellis hypochilii 3, epichilii 4-fimbriatis.

The flowers appear in a long pendulous raceme, not unlike that of Cymbidium pendulum, greenish yellow with a white lip streaked wih brown. The latter has a taper pointed middle lobe and is crested with perpendicular fringed plates. The pseudobulbs are six inches long.

6. COELOGYNE LENTIGINOSA Lindl. Folia I. n. 4.

C. racemo paucifloro, bracteis linearibus convolutis persistentibus, petalis linearibus, labello obovato plano lineis duabus elevatis continuis lobis lateralibus rotundatis intermedio subrotundo unguiculato duplo latiore emarginato.

Wild in Moulmein Lobb, (v. v. c. comm. dom. Veitch.). — I only know this very distinct species from a fragment communicated by Messrs. Veitch. The flowers are the size of C. flaccida; the lip is white finely freckled with brown near the base; the short lateral lobes are bordered with the same colour; the middle lobe is tinted with yellow and is rather wavy. The two lamellae reach about half way up the middle lobe, are slightly curved, and perfectly even.

7. COELOGYNE TOMENTOSA Folia I. n. 5.:

C. racemis longissimis laxis pendulis, bracteis magnis longe distantibus convolutis, labelli lobo medio ovali lateralibus obtusis lineis 3 elevatis serratis, ovario tomentoso.

Wild in tropical Asia (place unknown), T. Lobb, n. 187 (v. s. sp. in hb. Hooker). — Of this remarkable plant one specimen exists in Sir Wm. Hooker's herbarium. It consists of a raceme about eighteen inches long, having nineteen or twenty flowers with a downy ovary; the bracts are broad convolute bodies fully an inch long. Nothing is known of its colour. The sepals are lanceolate and very acute, as are the petals which are shorter as well as narrower. The flowers spread widely and are about two inches or more in diameter.

8. COELOGYNE ASPERATA Lindley, in Journ. Hort. Soc., IV. 221. Folia I. n. 6.:

C. racemis pendulis dense multifloris subpubescentibus, bracteis subrotundo-ovatis concavis duris siccis, sepalis lanceolatis carinatis, petalis angustioribus conformibus ecarinatis, labelli lobis lateralibus erectis ovalis obtusis intermedio oblongo obtuso crispo: disco dense verrucoso costis 3 inaequalibus laevibus pone basin.

C. Lowii Paxton's Mag. Bot., Sept. 1849, p. 225.

Wild in Borneo. Low, (v. v. c.). — Flowers full three inches in diameter, in drooping racemes a foot long; pale cream colour except the lip, which is richly marked with brownish yellow veins springing from a rugged bright orange central ridge. There is no doubt that C. Lowii, above quoted, was this; but the figure is a very bad one. — Huc Pescatorea I. 27.

9. COELOGYNE PANDURATA Lindley, in Gard. Chron., Dec. 10. 1853. Fol. I. n. 7.:

C. foliis maximis multinerviis, racemo longo pendulo, bracteis oblongis cucullatis distantibus persistentibus, petalis sepalisque lineari-oblongis, labello basi concavo cordato-oblongo retuso cis apicem crispo setaceo-mucronato (lateribus deflexis pandurato) lobis basilaribus nanis acuminatis disco laevi tricarinato utrinque crista alta duplici verruculosa aucto citra cristam copiose verrucoso.

Wild in Borneo. Loddiges; common on trees in shady places overhanging water. Low, (v. v. c. et s. sp. in hb. Hooker). — A very fine species, with leaves and raceme respectively eighteen and twenty inches long. The flowers, which are about two inches apart, are green, in a pendent raceme furnished with brown cucullate deci-

duous bracts as long as the peduncle. Each flower is about four inches across if fully expanded, with pale green sepals and petals, and a singularly warted lip, marked with deep, broad, black veins and stains, upon a greenish yellow ground. The crests are two deep doublewarted lines on each side of a three-ribbed central disk; these crests converge towards the middle of the lip, where they lose themselves in a field of pallid, rugged, irregularly situated, often two-lobed warts. The column is green, slightly expanded into thin rounded edges. The lip, although really oblong, yet, in consequence of the manner in which the sides are bent down, has much the form of a violin. A memorandum in the Hookerian herbarium states the flowers to „emit a beautiful perfume".

10. COELOGYNE APICULATA Rchb. fil. Huc *Panisea apiculata* Lindl. Fol. I. n. 3.:

P. folio anguste ovali petiolato racemo nutante bifloro multo longiore, bracteis linearibus canaliculatis ovario triptero brevioribus, sepalo dorsali reflexo, labello oblongo retuso apiculato ungue sigmoideo saccato.

Wild in Moulmein, at 5000 feet. T. Lobb, (v. s. sp.). — „Flowers greenish brown," rather smaller than in the next.

Obs. Nonne hic inserenda est haec sequens species?

11. COELOGYNE CROOCKEWITII Teissm. et Binnendyk Naturk. Tijdch. voor Nederl. Ind. Decemb. V. 1853: bulbis tetragonis ovatis monophyllis, foliis lato-lanceolatis coriaceis glabris, racemi bracteis deciduis, phyllis perigonii externis ovatis concavis carinatis, interioribus linearibus reflexis, labelli trilobi lobo medio obovato bifido undulato, lateralibus parvis acutis reflexis intus lineis elevatis, columna dilatata apice crenulata. Salak.

Obs. Icon, quam habeo, potius „Pholidotam" refert.

2. *Erectae.*

The species grouped under this section resemble each other nearly, and perhaps are too much subdivided. No evidence, however, exists in Europe to shew the nature of their variation, if any. They are only known from the Filiferous race by their petals not being extremely narrow; in general the flowers of the latter are almost solitary.

12. COELOGYNE THUNIANA Rchb. fil. in Otto et Dittrich Allg. Gartz. 1856. pag. 145: nulli affinis: uniflora, pseudobulbis lagenaeformibus rugoso sulcatis impressisve concoloribus, foliis synanthiis lineari ligulatis, nervo dorsali carinatis, labello ligulato, obovato, ante basin utrinque falcula antrorsa trifido, carinis geminis a basi in discum papula interjecta, gynostemio utrinque juxta foveam unidentato (tamen Coelogyne).

13. COELOGYNE TRINERVIS Lindl. LO., n. 11. Fol. I. n. 8.:

C. pseudobulbis ovatis in rhizoma crassum squamosum, foliis longis 3-nervibus lanceolatis plicatis in petiolum longum angustatis, racemo brevi stricto vagina imbricata, bracteis deciduis, petalis lineari-lanceolatis, labelli trilobi lobis rotundatis: intermedio subrotundo undulato lineis tribus flexuosis elevatis aequalibus e basi labelli ortis.

Wild in Tavoy, on the Tenasserim Coast. Wallich, (v. v. sp.). — A very pretty species. Leaves fifteen to sixteen inches long, straight and narrow. Raceme not more than five inches high, with about five flowers, the colour of which is unknowen.

14. COELOGYNE BREVISCAPA Lindl. Fol. I. n. 9.:

C. pseudobulbis ovatis corrugatis monophyllis, foliis anguste lanceolatis coriaceis petiolatis, scapis paucifloris strictis basi imbricatim squamatis, bracteis latis oblongis concavis persistentibus, labelli lobis lateralibus obtusis intermedio duplo majore subrotundo apiculato venis 2 flexuosis apice incrassatis intermedia filiformi, columna apice tantum denticulata.

C. angustifolia. Wight, Ic. t. 1641; nec A. R.

Wild in Ceylon Walker: Nilgherries, on branches of trees in clumps of forest near *Neddawuttim* Wight (v. s. sp. in hb. Hooker and Wight.) — This very distinct spe-

cies is, as Dr. Wight conjectures, distinct from the C. angustifolia of Richard (see No. 10). It is readily known by its coriaceus narrow leaves with two lateral longitudinal folds imitating so many nervures. The inflorescence resembles that of C. ovalis. The details of the lip in the Icones are in some respects very inaccurate.

Huc: *Coelogyne angustifolia*. A. Richard. Wight. Ic. V. I. 1851. N. 8. tab. 1641: pseudobulbs aggregated, ovoid oblong, the older ones naked, the youngs sheathed, one or two leaved at the apex; leaves lineare, lanceolate, acute, chanelled at the base, spotted beneath with white points, scape terminal, length of the leaves, 2—4 flowers; bracts linear, persistent, divaricate; lip erect 3 lobed, lateral lobes oblong, obtuse, middle one larger, acute, narrower below, furnished with 2 sinuous longitudinal crests. The white lip tinged with yellow. — Neilgherries, on branches of trees, in clumps of forests, near Nedda wullin. — My fig. diff. from Richards as to lead me to doubt their identity, esp. as regards the form of the lip, acute in his, very obtuse in mine. If I have erred, it is from confounding two specimens much alike.

15. COELOGYNE ODORATISSIMA Lindl. LO., n. 11. Fol. I. n. 10.:

C. pseudobulbis ovatis sulcatis, foliis 1—2 membranaceis nervosis racemo erecto 2—3-floro brevioribus, bracteis angustis cymbiformibus divaricatis, labelli trilobi 3-cristati lobo medio obtuso subundulato lateralibus brevioribus planis.

(A) Leaves oblong. Middle lobe of lip rounded.

Coelogyne odoratissima Wight, ic. t. 1640.

(B) Leaves much narrower. Middle lobe of lip slightly acute and narrower.

Coelogyne angustifolia A Rich., in Ann. des Sc., ser. 2, XV. t. 6. Wight, ic. t. 1641.

Wild A, Ceylon: on the mountain Nuera Ellia, Macrae; Nilgherries, on trees Wight; B, Nilgherries Wight, Perottet, 868, 522, (v. s. sp.). — Whole plant from four to six inches high, in dense tufts. Flowers pure white, very fragrant. There is no doubt, that C. angustifolia is a slight variety; A. Richard's figure, from whom I have an authentic specimen, is very erroneous, especially as to the parts and in the condition of the lip.

Huc *Coelogyne odoratissima* Lindl. Wight. Ic. V. I. 1851: pseudobulbs caespitose, ovate, leaves lanceolate, petiolated, length of the 2 or 3 flowers raceme: bracts boatshaped, divaricate, petals linear, lanceolate, lip 3 lobed, 3 crested, middle lobe undulated, orbicular, column entire. Flowers white, lip tinged with yellow. — Dodabella, Neilgherries on branches of trees. Flowers rainy season May — Oct. — Large masses covering several feet of branch. Pet. narrower than sepals.

Obs. Nescio, cur ill. Lindl. huc iterum citaverit iconem Wight. 1641, quam antea sub breviscapa citaverat.

16. COELOGYNE OCHRACEA Lindl. Lindley, in Bot. Reg. 1846, t. 69. Bot. Mag., t. 4661. Fol. I. n. 11.:

C. pseudobulbis ovatis apice tetragonis, foliis anguste lanceolatis in petiolum angustatis, racemo paucifloro basi squamis nitidis vaginato apice nutante longioribus, sepalis petalisque anguste lanceolatis, labelli trilobi intus pubescentis lobis lateralibus rotundatis intermedio ovato acuminato obtuso sinu denticulato integrove lamellis 2 rectiusculis integris cis medium apicem evanescentibus linea brevi elevata apice dentifera prope basin interjecta.

Wild in Bootan, Khasia; common on Thumathaya and Lamplangthaya Griffith, (v. v. c. et s. sp.). — Flowers pure white, with bright orange yellow blotches on the lip, very pretty, and extremely sweet-scented. In colour this appears to be variable, sometimes having yellow-brown ocellated blotches on the lip, sometimes having a dull brownish lip with a white border. The absence of supplemental processes to the elevated ridges of the middle lobe of the lip assists much in distinguishing it from C. ocellata etc. — Huc: Lem. Jard. fl. t. 312.

17. COELOGYNE NITIDA Lindl. LO., n. 7. Fol. I. n. 12.:

C. pseudobulbis oblongis obtusis squamis nitidis vestitis, foliis lanceolatis basi longe angustatis, racemis strictis basi squamis coriaceis laevigatis imbricatis arctissime vaginatis quam folia multo longioribus, bracteis deciduis, sepalis petalisque oblongis obtusis membranaceis, labelli lobis lateralibus rotundatis intermedio subrotundo cordato-ovato lineis 2 elevatis rectiusculis in limbum interruptis adjecta parvula utrinque.

(?) *Cymbidium nitidum* Roxb. Fl. Ind., III. 459. — *Coelogyne ? nitida* Lindley, Coll. Bot., p. 33.

Wild in Nepal Wallich; Sikkim-Himalaya, at 4—7000 feet J. D. Hooker, (v. s. sp.). What I understand by this name is that distributed by Dr. Wallich under his number 1984. It has the leaves of C. ocellata, but much shorter and more dense racemes arising from polished conical imbricated sheaths. The texture of the flowers is much thinner, and the parts so much rounder, that the flowers must be almost globular when fresh. They are said to be white and sweet-scented, with a stain upon the lip like those of C. ochracea.

18. COELOGYNE GLANDULOSA Lindl. Fol. I. n. 13.:

C. pseudobulbis ovatis sulcatis, foliis 2 oblongo-lanceolatis nervosis subsessilibus racemo erecto nutante multifloro subaequalibus, scapo basi laxe vaginato, bracteis persistentibus oblongis acutis floribus subaequalibus, labello ovato-lanceolato lobis lateralibus obtusissimis intermedio linguaeformi lineis 3 elevatis glanduloso-dentatis, columna subbiloba.

C. nervosa. Wight, ic. t. 1638; nec A. R.

Wild on the Nilgherries Wight, (v. s. sp. in hb. Wight.) — A larger plant in all respects than C. nervosa, with leaves of another form. The lateral lobes of the lip are much more distinct, there is never more than three crested lines, and these are bordered by short teeth resembling glands; the lateral crests are deeper than the middle one.

Hac: *Coelogyne nervosa* A. Rich. Wight. Ic. V. t. 1638. 1851: pseudobulbs ovate, covered with coriaceous scales, leaves broad elliptic acute, or sub-acuminate, striated and nerved, coriaceous, usually two, sheathing at the base: scape somewhat longer than the leaves, 2—6 flowered: fl. large, bracts shorter than the flowers, ovate acute, persistent, striated: sepals oblong elliptic, about equal, acute: lip, like sepals, 3 lobed, lat. lobes small, the middle one oval, lanceolate. Flowers pure white, bracts reddish brown. — Neilgherries, May, Juny. — Flow. white, lip tinged with orange. Abounds on the rocks overhangins the falls of Pycarrales also at the Avalanche. The spec. repres. flowered at Cimbatore, the roots having been brought down some weaks before.

19. COELOGYNE NERVOSA Lindl. A. Rich., in Ann. Sc., ser. 2, XV. p. 16. Fol. I. n. 14.:

C. pseudobulbis ovatis, foliis 2 coriaceis subrotundo-ovalibus sessilibus racemo erecto 2—4-floro brevioribus, bracteis cymbiformibus patulis ovario longioribus, sepalis petalisque oblongis conformibus, labelli 3—5-cristati lobo medio ovato acuto lateralibus rotundatis obsoletis.

Wild in the Nilgherries, on rocks near Neddoubetta Perrottet, (v. s. sp. comm. b. Richard.) — A species with the habit of C. odoratissima, but with roundish sessile coriaceous leaves, and flowers twice as large. Their colour is unknown. The plant figured under this name in Wight's Ic., t. 1638, is different (see n. 18).

20. COELOGYNE CORRUGATA Lindl. Fol. I. n. 15.: Wight, ic. t. 1639.

C. pseudobulbis ovatis rugosissimis, foliis 2 oblongis membranaceis undulatis racemo erecto trifloro longioribus, bracteis cymbiformibus oblongis, sepalis petalisque subaequalibus oblongis acutis, labelli medio tricristati lobis lateralibus acutiusculis intermedio ovato acuminato obtuso.

Wild in Khasia Lobb.; Courtallum, Pulney Mountains, Nilgherries Wight, (v. s. sp.

comm. cel. Wight et Lobb.) — Very near C. nervosa, but different in having singularly rugose pseudobulbs, and membranous wavy leaves. „Flowers pure white, except the crests and veins of the lip, which are yellow".

Huc *Coelogyne corrugata* R. Wight. Ic. V. I. 1639. 1851: pseudobulbs caespitose, ovate, reticulately corrugate; leaves oblong, elliptic, subacuminate, racemes about the length of the leaves, 1—6 flowered, bracts caducous or wanting: fl. large, sepals and petals conformable, oblong, ovate, acute; lip 3 obed, lateral lobes small, middle one produced, ovate, obtuse, the claw furnished with three longitudinal undulate crenate coloured crests. — Courtallum, Pulney Mounts, Neilgherries, Aug. Sept. — Limb of lip marked with orange and yellow lines like the crests, the rest of fl. white. Peculiar feature of the spec. is the deeply corugated, wrinked pseudobulb whence I have taken the name.

21. COELOGYNE CORYMBOSA Lindl. Fol. I. n. 16.:

C. pseudobulbis oblongis teretibus, foliis ovalibus basi in petiolum brevem angustatis, racemis 3—4 floris e vagina laxa imbricata corymbosis, bracteis cito deciduis, sepalis petalisque lanceolatis, labelli lobis lateralibus rotundatis apice denticulatis intermedio ovato-lanceolato plano integerrimo, lineis 3 elevatis quarum 2 longioribus crispis altera abbreviata ad sinus labelli utrinque auctis.

Wild in Sikkim-Himalaya, common at 6—9000 feet of elevation; Khasia at 4—5000 feet J. D. Hooker, (v. s. sp. comm. cel. J. D. H.) — Much resembles C. ocellata, from which it differs in the pseudobulbs, short leaves, corymbose racemes, and much longer middle lobe of the lip. Flowers „white, sweet-scented; lip with red veins on the lower half and six ocellate spots at the base of the lower lobe". — Ic. Hook.

22. COELOGYNE BREVIFOLIA Lindl. Fol. I. n. 17.:

C. pseudobulbis ovatis subangulatis nitidis, foliis ovato-oblongis utrinque acutis racemis paucifloris basi nudis brevioribus, racemo laxo erecto paucifloro bracteis deciduis, sepalis petalisque anguste lanceolatis, labelli trilobi intus pubescentis lobis rotundatis lamellis 2 rectiusculis cis apicem medium evanescentibus adjecta parvula utrinque linea alta membranacea in axin inferiorem.

Wild in Khasia, at the height of 4—5000 feet J. D. Hooker, and T. Thomson, (v. s. sp. comm. cel. invent.) — Very like C. ochracea, but the leaves are broad and short, the flowers twice as large, and the additional tubercles of C. ocellata are present on each side of the middle lobe of the lip.

23. COELOGYNE OCELLATA Lindl. LO., n. 8. Bot. Reg. 1839, misc. 25. Bot. Mag. t. 3767. Fol. I. n. 18.:

C. pseudobulbis ovatis angulatis squamis nitidis vestitis, foliis lanceolatis basi longe angustatis racemis strictis basi nudis aequalibus, bracteis cito deciduis, sepalis petalisque oblongo-lanceolatis, labelli lobis lateralibus truncatis intermedio ovato, lineis tribus elevatis rectiusculis altera abbreviata dentata ad sinus labelli utrinque auctis.

Wild in Sylhet and Sermore Wallich; Khasia Lobb; Bootan Griffith; Sikkim-Himalaya, at 7000 feet J. D. Hooker, (v. s. sp. et v. c.) — Leaves nine or ten inches long, very narrow towards the base. Sepals and petals pure white; the lip also white, but with two very bright orange yellow spots on each lateral lobe, and two others smaller, and of the same colour at the base of the middle lobe, besides which there are some lateral streaks of brown. The column is bordered with brilliant orange yellow. The crests of the lip are three, which converge towards the base of the middle lobe, and there the lateral ones diverge again over a pair of convexities, beyond which they disappear; on each side of them, at the base of the said convexities, and on the outside, is an additional short curled crest. The flowers grow in erect narrow racemes about six inches long, and are themselves an inch or more long. They

have none of the loose corymbose arrangement of C. corymbosa, nor do they proceed from lax sheaths of imbricated scales. The figure in Bot. Mag. is from a starved specimen.

24. COELOGYNE CUMINGII Lindl. Lindley, in Bot. Reg., 1840, misc. 178, 1841, t. 29. Bot. Mag. t. 4645. Fol. I. n. 19.:

C. pseudobulbis ovatis, foliis geminis lanceolatis 5-nerviis utrinque acuminatis racemo paucifloro longioribus, scapo basi nudo, bracteis convolutis floribus longioribus, petalis lineari-lanceolatis, labelli trilobi lobis lateralibus rotundatis intermedio ovato acuto revoluto basi crispo, lamellis 3 crispis continuis adjectis 2 abbreviatis prope apicem.

Wild in Singapore Cuming, (v. v. c.) — Flowers handsome, snow-white, except the middle of the lip, which is yellowish, with orange tips to the crested lamellae. Closely allied to C. trinervis, which is however readily known by its very long narrow leaves, its shorter bracts, smaller flowers, and much shorter middle lobe to the lip, which also appears to want the outlying processes on either side of the ridges. — Ueo: Van Houtte VIII. 764. Lem. Jard. fleur. t. 287.

25. COELOGYNE CRISTATA Lindl. Lindley, Coll. Bot., p. 33. LO., n 2. Bot. Reg., 1841, t. 57. Paxton's Fl. Gard., ic. xyl., n. 312 Fol. I. n. 20.:

C pseudobulbis oblongis demum angulatis, rhizomate crasso squamoso, foliis lineari-lanceolatis, racemo erecto 3—5-floro foliis breviore basi squamis corneis vaginato, bracteis oblongis divaricatis persistentibus, petalis oblongo-lanceolatis undulatis, labelli trilobi crista triplici interrupta: infima brevi 5-lamellata intermedia multifida pectinata suprema bilamellata denticulata, lobo medio rotundato parvo plano obtuse subtridentato

Cymbidium speciosissimum. Don prodr. nep. 35.

Wild in Nepal, Sylhet, Kamaon Wallich; at Champawat at 5500 feet Strachey and Winterbottom; Darjeeling Griffith; Sikkim, at the elevation of 5—8000 feet J. D. Hooker (v. v. c. et s. sp.) — One of the most striking of the white-flowered Indian Orchids. It forms oblong or ovate two-leaved pseudobulbs upon a hard scaly rhizome. The leaves are lanceolate, tough and flaccid, with some waviness at the edge. The flowers appear in imbricated racemes, in the beginning concealed by brown dry spathes, which afterwards sheathe the ovary and its stalk. When expanded they are each fully four inches in diameter. The sepals and petals are white, lanceolate, and acuminate. The lip, also white, is concave, and three-lobed; the lateral lobes half-oblong, truncate at the upper end, and somewhat wider than the transverse roundish middle lobe. Along the middle run five parallel veins covered by delicate yellow glandular fringes; at the base of each of the three central is a wavy plate, and at the upper end of the two which stand on each side the middle vein is another solid plate terminating abruptly in front and more or less toothed.

— 3. *Proliferae.*

All the species here collected agree in having a number of hard imbricated scales immediately below the flowers, and not at the foot of the scape. They often, perhaps always, produce a second scaly sheath beyond the first series of flowers, and out of that sheath arises a second series of flowers. C. barbata distinctly combines this group with the last, through C. cristata.

26. COELOGYNE BARBATA Lindl. Griffith, Itin. Not., p. 72; Notul., p. 280; ic. t. 291, fig. 2. Fol. I. n. 21.:

C. pseudobulbis subampullaceis, foliis oblongo-lanceolatis longe petiolatis valde coriaceis undulatis, scapo stricto rigido apice squamis coriaceis arcte imbricato, racemo subflexuoso sessili, bracteis maximis cucullatis cito deciduis, sepalis oblongis, petalis lanceolatis, labello trilobo basi saccato margine anteriore costisque tribus ciliato-fimbriatis.

Wild in Bootan Griffith; Khasia, near Mamloo Id., Lobb., 4—5000 feet, J. D. Hooker

and T. Thomson, Churra Punjee Griffith, (v. s. sp. comm. W. G., J. D. H. and T. T.) — This is perhaps the finest of this fine genus. The coriaceous leaves are more than fifteen inches long; the scapes are erect, very stiff, as long as the leaves, and furnished at the apex with an imbricated sheath of hard scales, out of which appears a flexuose raceme four to six inches long, composed of very large blunt deciduous bracts. The flowers are fully two inches and a half in diameter, pure white, except very long hairy fringes, which are brown at their base where they border the lip, and wholly brown where they cover the veins, and form three shaggy crests. Judging from excellent dried specimens, I should suppose that the whole of the middle lobe of the lip is brown also; but this is not mentioned by Griffith, whose figure is a bad one.

27. COELOGYNE ELATA Lindl. LO., n. 5. Wall. Pl. As., III. 12, t. 218. Bot. Reg. 1839, misc. 151. Fol. I. n. 22.:

C. pseudobulbis oblongis angulatis, foliis oblongis coriaceis basi attenuatis longe petiolatis, scapo rigido stricto foliis breviore apice squamis distichis coriaceis vaginato, racemo rectiusculo sessili, bracteis „lanceolato-navicularibus" cito deciduis, petalis lineari-lanceolatis, labelli plani medio bicristati lobo medio cordato-ovato crenulato lateralibus obsoletis.

Coelogyne — Griffith, Ic. t. 290.

Wild in Nepal and Sylhet Wallich; Bootan Griffith; Sikkim-Himalay, 4—6000 feet J. D. Hooker; Kamaon in the Sarjee Valley, at 5700 feet Strachey and Winterbottom, (v. v. c. et s. sp.) — Leaves more than a foot long; scape seated upon a large oblong pseudobulb, and terminated by a sheath formed of numerous imbricated bracts, out of which appear eight or nine white flowers, stained with yellow near the point of the lip, and having an unpleasant smell, very like that of the Barberry blossom. The two wavy crests proceed from the base to half way up the middle lobe; they are rich orange yellow towards the point, white otherwise. I presume this is Nr. 840 of Griffith's Itinerary Notes, p. 163, found on rocks near Panukka, in Bootan.

28. COELOGYNE PROLIFERA Lindl. LO. n. 6. Fol. I. n. 23.:

C. pseudobulbis elongatis subcompressis teretibus, foliis lanceolatis longe petiolatis, scapo terminali gracili erecto foliis duplo longiore saepius prolifero sub quoque racemo squamis distichis arcte vaginato, bracteis deciduis, sepalis oblongis discoloribus, petalis linearibus, labelli trilobi lobo medio retuso denticulato lateralibus obtusissimis lineis 2 elevatis continuis.

Wild in Nepal, near Neakote and Toka, on trees and rocks Wallich; Khasia, at 5000 feet — J. D. Hooker and T. Thomson; Sikkim-Himalaya, 2—4000 feet J. D. H., (v. v. c. et s. sp.) — When fresh the flowers are greenish yellow; when dried the sepals are dark glaucous purple, and almost glumaceous. The specimens, which I have examined vary in the condition of the point and margin of the lip, which is finely toothed or entire, and retuse or shlighly acute.

29. COELOGYNE FLAVIDA J. D. Hooker, ined. Fol. I. n. 24.:

C. pseudobulbis ovatis subangulatis, foliis lanceolatis petiolatis, scapo terminali gracili erecto foliis subaequali prolifero sub quoque racemo squamis distichis arcte vaginato, bracteis deciduis, sepalis ovatis, petalis filiformibus, labelli trilobi oblongi obtusissimi lobis lateralibus nanis obtusis intermedium cordatum imbricantibus: lineis 2 elevatis in sinus abeuntibus, columna subaptera.

Wild in Khasia Lobb.; Sikkim-Himalaya Cathcart, (v. s. sp. et ic. pict.) — Flowers pale green, not larger than in Pholidota, to which this species forms a transition, by its almost wingless column and obsolete short crests.

30. COELOGYNE LONGIPES Lindl. Fol. I. n. 25.:

C. pseudobulbis cylindraceis teretibus, foliis lanceolatis acutissimis

in petiolum gracilem angustatis, scapo terminali filiformi foliis longiore prolifero sub quoque racemo squamis distichis arcte vaginato, bracteis deciduis, sepalis ovatis, petalis filiformibus, labelli trilobi lobis lateralibus obtusis divergentibus intermedio obovato-subrotundo; lineis 2 elevatis ad basin decurrentibus, columna late alata.

Wild in Khasia, at 4—5000 feet J. D. Hooker and T. Thomson, (v. s. sp. comm. cel. inventores). — The very long narrow pseudobulbs distinguish this from the other proliferous species. The flowers are intermediate in size between C. prolifera and flavida. The sepals and lip are as much saccate at the base as in G. Gardneriana.

4. *Filiferae.*

Erect, solitary, or racemose flowers, with extremely narrow, usually thread-shaped petals are characteristic of this little group, which, moreover, never has the hard shining pseudobulbs and sheathing scales of the erect section.

31. COELOGYNE FUSCESCENS Lindl. LO., n. 10. Fol. I. n. 26.:

C. pseudobulbis elongatis teretibus, foliis latis oblongis plicatis utrinque acutis, racemo nutante paucifloro, bracteis deciduis, petalis acuminatis linearibus, labelli lobo medio amplo ovato acuto undulato lateralibus nanis; lineis 3 elevatis juxta basin.

A. Lateral lobes of lip quite obsolete.

B. brunnea. Lateral lobes of the lip acute, dull brown. Elevated lines of the crest reddish orange.

C. brunnea. Lindley, in Gard. Chron. 1848, p. 71, c. ic.

Wild, A. in Nepal on trees Wallich. B. Khasia, at the height of 3000 feet J. D. Hooker, and T. Thomson; Sikkim-Himalaya, 4000 feet J. D. Hooker (v. s. sp. comm. cel. invent. et v. c.) — Leaves ten inches long by three broad. Raceme drooping, five to sixflowered. Flowers brownish green. The dorsal sepal broader than the others. Lip with four cinnamon spots, one on each of the small lateral lobes; and two at the base of the middle lobes. The C. brunnea differs in having short, well-defined lateral lobes to the lip; but its habit is so much the same that I can now only regard it as a variety.

32. COELOGYNE SPECIOSA Lindl. LO., p. 39. Bot. Reg. 1847, t. 23. Bot. Mag. 4889. Fol. I. n. 27.:

C. pseudobulbis ovato-oblongis costatis monophyllis, foliis oblongo-lanceolatis 5—7-nerviis, pedunculis 1—2-floris pseudobulbis parum longioribus, petalis linearibus reflexis, labelli trilobi laciniis lateralibus antice denticulatis intermedia biloba rotundata cristis duabus muricatis crassis sub apice ipso labelli confluentibus tertia brevi tenui basilari interjecta.

Chelonanthera speciosa. Blume, Bijd. 384, t. 51.

Wild in Java; in the woods of M. Salak Blume, Lobb, (v. v. c.) — Flowers in pairs at the end of a slender peduncle, about four inches long. Sepals and petals pale tawny; lip pitch-brown. Column broad, white; lip with a pure white termination. Flowers nearly four inches in diameter when fully expanded.

Huc De Vriese Illustrat. t. I. f. 2. et tab. XI. f. 7.

33. COELOGYNE INCRASSATA Lindl. LO, n. 4. Fol. I. n. 28.:

C. „bulbis oblongis subtetragonis, foliis lanceolatis nervosis, pedunculo nutante multifloro, labello intus bicristato nudo, limbi lobo medio ovato incrassato". Blume.

Chelonanthera incrassata. Blume, p. 384.

Wild in Java; in woods on M. Pantjar Blume. — „Flowers dirty white, transparent. Limb of the lip brown, wavy". I have never seen this. It is placed by the learned author of the name next C. speciosa. Can it be C. tomentosa, Nr. 52.

34. COELOGYNE FIMBRIATA Lindl. Lindley, in Bot. Reg., t. 868. Ib. 1838, misc. 172. *Bot. Cab.*, t. 1825. Fol. I. n. 29.:

C. pseudobulbis subrotundo-oblongis estriatis. foliis ovali-lanceolatis undulatis acutis pedunculo basi vaginato paucifloro longioribus, bracteis concavis cartilagineis deciduis floribus longioribus, petalis filiformibus reflexis, labelli trilobi lobis lateralibus rotundatis in fronte denticulatis, intermedio angustiore ovato pilis fuscis fimbriato, lamellis 2 elevatis rectis parum denticulatis.

Wild in China J. D. Parks; Khasia Mountains, at 4000 feet J. D. Hooker, and T. Thomson (v. v. c. et s. sp.) — An inconspicuous creeping species, the smallest in the genus. Pseudobulbs perfectly even Flowers pale dirty yellow, with a dull purple fringed lip in the Chinese plant; „pale olive brown, with the lip paler, fasciated, crested and fimbriated with dark purple" (J. D. H.) in the Khasia plant.

Huc: Lindl. in Champion Fl. Hongkon. Hook. Journ. b. VII. p. 34. „a pretty species, flowering abundantly in ravines about October. The sepals are lucid white, and the lip white, with the fimbriated portion puce coloured. It has no perfume."

var. *acuminata* Regl. MSS. in Ind. Sem. Petrop. 1855. Differt sepalis acuminatis, labelli lobo intermedio acuto. (Sepala C. fimbriatae acuta et labelli lobus intermedius retusus).

35. COELOGYNE OVALIS Lindl. Lindley, in Bot. Reg. 1838, misc. 171. Fol. I. n. 30.:

C. pseudobulbis fusiformi-ovalibus striolatis, foliis ovali-lanceolatis acutis spica longioribus, pedunculo basi vaginato sub- 4-floro, bracteis concavis cartilagineis floribus longioribus, petalis reflexis filiformibus, labelli trilobi lobis lateralibus in fronte pectinatis intermedio ovato emarginato pilis fuscis villoso et fimbriato, lamellis 2 elevatis crispis, columna apice subintegra

C. fimbriata. Lindley, in Wall. Cat., n. 1957. Griff. Ic., t. 291, f

Wild in Nepal and Kamaon Wallich (v. v. c. et s. sp.) — Much like C. fimbriata, but far larger in all its parts. The pseudobulbs are narrowly oval, not roundish oblong; the flowers are twice the size with a far more shaggy lip, and crisp not straight crests. It is sometimes known in continental gardens as C. fuscescens, which is a totally different species.

36. COELOGYNE PILOSISSIMA Hort. Donat. 144 :

„Pseudobulbis rotundo-ovalibus basi inflatis striatis, bracteis paucilongioribus, rhizomate ramoso squamis coriaceis vestito ascendente, foliis ovali-lanceolatis acutis, pedunculo basi vaginato erecto 2—00 flore longioribus, petalis filiformibus reflexis, bracteis deciduis, labelli trilobi lobis lateralibus erectis angulatis intus striatis, intermedio rotundato pilis fusco nigris villosissimo et margine ciliato fimbriato, medio linea fusca notato, lamellis elevatis crispis, columna apice subdentata."

„Cette espèce a été envoyée de Calcutta avec nombre d'autres Orchidées recueillies par un amateur; c'est une belle espèce; elle produit des fleurs couleur de paille de 10 centimètres de diamètre; le labellum est brun, couvert de magnifiques poils très nombreux, presque noirs. Elle est entre le Coelogyne ovalis et fuliginosa Lindl. Elle se distingue particulièrement de cette dernière espèce par la continuation (non interrompue) des deux lamelles; elle développe deux fleurs successivement."

37. COELOGYNE FULIGINOSA Lindl. in Lodd. Cat. — Bot. Mag., t. 4440. Fol. I. n. 31.:

C. pseudobulbis angustis fusiformibus rhizomate ramoso ascendente, foliis lanceolatis undulatis racemo 2—00-floro longioribus, bracteis deciduis, petalis filiformibus, labelli trilobi lobis lateralibus vix intermedio latioribus acutis in fronte fimbriatis intermedio oblongo retuso fimbriato, lamellis 2 flexuosis versus basin subito interruptis.

Wild in the Khasia Muntains, at 5000 feet J. D. Hooker and T. Thomson; Sikkim-Himalaya, on rocks, in valleys, at 5000 feet J. D. Hooker (v. v. c. et s. sp. comm. cel. invent.) — A fine species, with broad orange-yellow flowers and a brown lip.

It is very near C. fimbriata and ovalis, from which its crests, interrupted somewhere above the base, seem to distinguish it clearly. The Sikkim and Khasia specimens from Hooker and Thomson have flowers much smaller than the cultivated plant; but beyond size, I find no marks of distinction.

In like manner there is among Hooker and Thomson's Khasia plants (Nr. 180) a very large-flowered imperfect specimen of this breed, beyond size undistinguishable by the materials before me. It is probably another species. — Huc: Lem. Jard. fl. t. 7.

38. COELOGYNE SIMPLEX Lindl. Fol. I. n. 32.:

C. pseudobulbis ovalibus elongatis teretibus, foliis 2 oblongis multinerviis racemis erectis paucifloris basi imbricatim vaginatis longioribus, bracteis elongatis cito deciduis, floribus campanulatis, petalis filiformibus, labello ovali vix trilobo acuto subcarnoso plano lineis 2 continuis elevatis tertia brevi ad basin lobi medii adjecta.

Wild in Java Lobb. (v. s. sp. comm. dom. Veitch.) — Flowers about the size of Hyacinthus nutans, four to six in an erect raceme; the flower-buds only wrapped in bracts, as in C. longifolia.

39. COELOGYNE MINIATA Lindl. LO., n. 16. Fol. I. n. 33:

C. pseudobulbis ovatis sulcatis in rhizoma ramosum annulatum, foliis 1—2 oblongo-lanceolatis racemo erecto brevi flexuoso longioribus, sepalis ovatis, petalis linearibus „labello intus lineis 2 elevatis; limbo erecto acutiusculo“.

Chelonanthera miniata. Blume, p. 385.

Wild in Java; near the cataracts of the R. Tjikundul, on M. Gede, and on the lofty parts of M. Salak on trees Blume. — There is a drawing among Professor Reinwardts, under the name of Dendrobium miniatum, which I suppose to be this plant. It has the habit of Pholidota articulata, with racemes from one to two inches long, and pinkish flowers three-quarters of an inch long. The bracts are deciduous and like those of C. odoratissima.

40. COELOGYNE MICRANTHA Lindl. in Gard. Chronicl. 1855. 178. a.

C. (§. filiferae) pseudobulbis oblongis angustis diphyllis, foliis lineari-lanceolatis racemo sessili (?) basi imbricato longioribus, sepalis ovatis aequalibus, petalis filiformibus brevioribus, labelli trilobi lobo medio subrotundo emarginato, disco lamellis pluribus in fimbrillis solutis apice bilamellato, basi bidentato.

Dick. Dal. Park. — Malay? appraches C. miniata of Java, which has a lip with a pair of elav. lives. — Flowers very small, pale brown, with the back of lip marked with the sooty brown stain so characteristic of filif. Coel.

5. *Flexuosae.*

41. COELOGYNE LONGIFOLIA Lindl. LO., n. 15. Fol. I. n. 34:

C. pseudobulbis sulcatis ovatis, foliis striatis longo-lanceolatis, racemo elongato flexuoso multifloro, bracteis cum floribus simul decidentibus supra flores arctissime imbricatis, sepalis carinatis, petalis filiformibus, labello oblongo emarginato plano bilamellato.

Chelonanthera longifolia. Blume Bijdr. 385, t. 51.

Wild in Java Lobb; near the source of the river Tjiburree on M. Gede, and on M. Salak, near Passir Java, on trees Blume. (v. s. sp. in hb. Hooker, et ic. pict.) — Leaves eighteen inches long, or less. Raceme from five to fifteen inches long, with a flexuose rhachis like that of a grass, or a Pholidota. Only one flower opens at a time, all the previous ones having fallen off, while the upper part of the inflorescence is included in long closely imbricated glumaceous bracts. Flowers cinnamon-brown about an inch long, with a greenish stain between two raised lines. A figure of it occurs among Professor Reinwardt's valuable collection of drawings, marked Cymbidium stenopetalum.

42 COELOGYNE RUMPHII Lindl. Fol. I. n. 36:

Angraecum nervosum. Rumph. Herb. Amb., VI. t. 48.

Wild in Amboyna; on trees Rumphius. — I only know this from the above figure It is evidently very near C. bilamellata and longifolia, to the latter of which Blume refers it. But it bears a broad ribbed leaf twelve or fifteen inches long by four wide and the racemes are only three or four-flowered. It is nearest C. bilamellata, but its flowers are four times as large, resembling a flying hornet, according to Rumphius, who states them to be yellowish white outside, and variegated with brown in the inside.

§ 3. PLEIONE. Don. Prodr. Nep., 37. — Gomphostylis, Wallich.

There is something so peculiar in the plants called Pleione by Don, that it would be desirable to find some means of separating them from Coelogyne. Occasionally I have imagined, that they might be defined by such characters as a saccate lip, an undivided lip furnished by bearded not lamellate veins, or by the divisions of the flower tapering to the base instead of being obtuse. But the last peculiarity, on which I had most relied is so entirely set aside by C. Hookeriana, which has the form of C. cristata, that after all I find it necessary to leave them as an Alpine form of Coelogyne, in the hope that future observers will discover some sound generic character. All the species are Alpine. Dr. Royle describes the P. praecox as being found ornamenting with its large, richly-coloured flowers the branches of Oaks on Loudour, at 7500 feet of elevation, in 30° N. Lat., but only during the moisture of the rainy season. The secret of their successful cultivation in England lies in keeping them cool and dry while at rest, and forcing them with heat, moisture and bright light as long as they are inclined to grow.

43. COELOGYNE HOOKERIANA Lindl. Fol. I. n. 37:

C. pseudobulbis ovatis glabris, foliis synanthiis oblongis scapo longioribus vaginis laevibus, bractea ovario breviore, sepalis petalisque erectis oblongis acutis, labello transverso rhomboideo retuso basi circulari serrato venis 7 villosis, clinandrio cuneato.

Wild in Sikkim-Himalaya; Darjeeling, on rocks in woods at 7—10,000 feet J. D. Hooker (v. s. sp. comm. cel. invent. et ic. pict.) — A pretty little plant, about four inches high, with almost the habit of Cypripedium guttatum. Flower more than an inch and a half long, with bright rose-coloured sepals and petals, and a white lip tinged or daggled with pink. The lip is not united to the column in any degree, the parts of the flower do not taper to the base, and the leaves and flowers all appear at the same time, in which circumstances this differs from other Pleiones.

44. COELOGYNE DIPHYLLA Lindl. Fol. I. n. 38:

C. pseudobulbis oblongis medio constrictis, foliis geminis angustis subcoriaceis acuminatis, pedunculo flore ter longiore, bractea obtusa inflata apiculata ovarii longitudine, labello obtuse trilobo emarginato venis fimbriatis 5—7 interruptis altera brevi adjecta utrinque juxta apicem.

Pleione diphylla. Lindley, in Paxton's Fl. Gard., sub t. 51.

Wild in Khasia Griffith (v. s. sp. comm. beat. invent.) — I have specimens of this plant from Mr. Griffith, who found it on the Khasia Mountains, in shaded rocky places at Churra: and whose memorandum appears in his itinerary Notes, p. 44, Nr. 684. From this it appears that the leaves are somewhat coriaceous, and grow in pairs on the summit of oblong pseudobulbs, contracted in the middle, and spotted with purple on a green ground. The flowers are said to be very handsome, and white; the lip being stained and lined inside with violet and crimson, and decorated with from seven to nine lines of yellow fringes.

45. COELOGYNE LAGENARIA Lindl. Lindley, in Paxton's Fl. Gard., t. 39, fig. 2. Fol. I. n. 39:

C. pseudobulbis lagenaeformibus nebulosis, bractea cucullata acuta

basi longe angustata, sepalis petalisque lineari-lanceolatis acuminatis, labello rotundato integerrimo emarginato lineis 5 barbatis.

Pleione lagenaria. Lindley, in Paxton's Fl. Gard., t. 39. fig. 2.

Wild on the Alps of India T. Lobb (v. v. c.) — Flowers deep rose-colour with very acuminate segments. Lip white, with a yellow disk and crimson streaks at the edge.

Huc Lem. Jard. Fl. I. tab. 93. n. 2.

46. COELOGYNE MACULATA Lindl. Lindley, in Wallich, Pl. as. rar., I. 45, t. 53. Bot. Mag., t. 4691. Griffith, Not. III. 281. Fol. I. n. 40.

C. pseudobulbis unicoloribus umbonatis crassis basi angustatis, bractea brevi subrotunda cucullata inflata, sepalis petalisque ovalibus acutis, labello rotundato integerrimo emarginato lineis 7 barbatis.

Pleione maculata. Lindley, in Paxton's Fl. Gard., t. 39, fig. 1.

Wild in Khasia, on the trunks of trees and among moss Wallich; 4—5000 feet: Hooker and Thomson; Assam Simons (v. v. c. et s. sp.) — Flowers pure white except the lip, which is yellow on the disk and marked with crimson streaks at the edge. The native name is Atis-Chakarpate according to Wallich.

Huc: Lem. Jard. Fl. I. tab. 93. n. 1.

47. COELOGYNE HUMILIS Lindl. LO., p. 43. Fol. I. n. 41:

C. pseudobulbis lagenaeformibus, bractea oblongo-lanceolata petaloidea ovario longiore demum retracta, pedunculo denudato, sepalis petalisque lineari-lanceolatis patentibus planis, labello ciliato emarginato lineis 6 fimbriatis distantibus venis totidem coloratis interjectis.

Pleione humilis. D. Don, Fl. nep. p. 37. Paxton's Fl. Gard., t. 51.

A. Lip spotted and veined with rose-colour.

B. Lip spotted and stained with yellow. Column with a few crimson spots.

Wild on the Indian Alps; Upper Nepal, among moss, on the trunks of trees Buchanan Hamilton; Bootan mountains, in dense forests towards Sautagong at the elevation of 8000 feet above the sea Griffith; the Khasia hills at Sanshda, at the height of 7000 feet T. Lobb; Sikkim, at 7—8000 feet J. D. Hooker and Cathcart (v. v. c. et s. sp.)

This differs from both C. maculata and lagenaria in the form of its pseudobulbs, in the narrowness of the sepals and petals, and especially in the long fringes that border the lip, and which also occur upon six of the veins on the inside of the lip. The bract too is quite different, petaloid and pale violet at first, then shrinking and shrivelling till it leaves the peduncle naked, remaining at the base of the peduncle like an old-fashioned leather buskin. Flowers white with orange veins and spots on the lip. Dr. Hooker observes that the lip is very distinctly adnate to the base of the column, and that the flowers vary somewhat in colour and spotting.

Huc: Lem. Jard. Fl. X. tab. 136.

48. COELOGYNE PRAECOX Lindl. LO. 20. Fol. I. n. 42:

C. pseudobulbis turbinatis umbonatis, foliis 3-plurinerviis vaginis tuberculatis, bracteis obovatis ovario longioribus, labello subrepando apice bifido dimidia apicali lacera, venis 5 disci dentato-cristatis, clinandrii 4-partiti laciniis intermediis inflexis.

A. Leaves green. Bracts very deciduous. Lip lacerated at the end; with the crests reaching nearly to the point.

Epidendrum praecox. Smith, Exot. Fl. t. 97. — *Pleione praecox*. Don. prodr. t. 37. — *C. Wallichiana*. Griffith, notul. p. 402. Bot. Mag., t. 4496.

B. SANGUINEA. Leaves crimson. Bracts more permanent. Lip as in A.

C. WALLICHIANA. Leaves green. Bracts deciduous. Lip plaited and toothed at the end, with the teeth of the crests very short and confined to the disk.

C. Wallichiana. LO., p. 43. Wall. Pl. as. rar. I. t. 54. Bot. Reg. 1840, t. 24. — *Pleione Wallichiana*. Lindley, in Paxton's Fl. Gard., sub t. 51.

Wild in the Himalayas; A Khasia at 4—7000 feet Hooker and Thomson; Myrung wood.

on rocks Griffith; Nipal Buchanan Hamilton; branches of oaks on Loudour; at 7500 feet, during the moisture of the rainy season Royle; B. Sikkim, on trees at 5—8000 feet J. D. Hooker; C. Pundua Wallich (v. v. c. et s. sp.)

Flowers very showy, deep rose-coloured, fully three inches long, solitary, or occasionally in pairs. The two first varieties above mentioned differ not only in the colour of the leaves, which are green in the one and crimson in the other, but in the form and texture of the flowers which are shorter and more fleshy in B. than in A. In both the pseudobulbs are richly spotted with crimson. A most beautiful plant, with faintly scented flowers. — J. D. H. Called Caybu swa in Nipal according to Buchanan Hamilton.

With regard to C. Wallichiana, I am obliged to confess that it must be regarded as a mere variety. I have seen no wild specimen, unless perhaps a plant gathered by Griffith, and forming n. 1017 of one of his series. Undoubtedly it has the end of the lip more abruptly separated from the sides than in A. or B., and plaited as well as toothed; and, moreover, the crests of the lip are very short and confined to the disk. But these are not distinctions upon which it is safe to rely. Griffith's C. Wallichiana is in all respects A. Mr. Bateman has well described the general appearance of C. „The pseudobulb has much the form and hue of a truffle, and loses its leaf before the appearance of the flowers, which come up one on either side. They are almost as large as those of Cattleya labiata, and are of a uniformly rich transparent rose-colour, except in the interior of the lip, which is decorated with a broad streak of yellow on its disk and traversed by five parallel ridges of white tubercles. There are also a few deep crimson stains scattered on its surface". The native name is Atia-Palangcha, according to Wallich.

Obs. Ad Wallichianam adde Lem. l. c. 158.

Doubtful species.

49. COELOGYNE CAULESCENS, Griffith, Notulae, p. 282, from swampy places at Malacca, near Pulo Bisar, on the coast, is certainly not a species of this genus. It is said to have tolerably large, white, very fugitive flowers; and to be three to four feet high. I possess a specimen, but not in a state for examination. The inflorescence is that of Bromheadia. It may be a Pholidota.

Coelogyne uniflora } = *Panisea.*
„ *parviflora* }

Obs. Quae dicitur l. c. a cl. Lindley Coelogyne javanica sub n. 48. est Pogonia.

Haec quidem Coelogynae Lindleyanae. Reichenbachianae satis distant. Afferuntur enim haud paucae species ex aliis „generibus."

Sect. *OTOCHILUS.* Columna clavata apice minute alulata. Labellum basi utrinque auriculatum, ceterum lanceum.

50. COELOGYNE ALBA. *Otochilus alba* Lindl. Orch. 35.
51. COELOGYNE FUSCA. *Otochilus fusca* Lindl. l. c. — Hook. B. Mag. 3921.
52. COELOGYNE PORRECTA. *Otochilus porrecta* Lindl. l. c.

Sect. *CRINONIA.* Colnmne minuta propo aptera. Labellum valde abbreviatum.

53. COELOGYNE PUMILA. *Dendrochilum? pumilum* Rchb. fil. in Bonpl. 1856.
54. COELOGYNE GLOBOSA. *Crinonia globosa* Bl. *Pholidota globosa* Lindl.

Sect. *CHELONANTHERA.* Columna brevis bene marginata. Labelli limbi postici erecti, antice subito expansi. Lamellae breves corniformes in disco vel nullae.

55. COELOGYNE NERVILLOSA. *Pholidota nervosa* Rchb. fil. *Acanthoglossum nervosum* Bl.

56. COELOGYNE CLYPEATA. Huc; *Pholidota clypeata* Lindl. Paxt. I. p. 12.

Flowers resemble those of P. imbricata, but stand in a spike not more than 3 inches long. The column is very like a 3 lobed petal bordered with brown, and gives the flower the appearance of having two opposite lips. Pseudobulbs about 2 inches long, with a dark green leaf.

Borneo. — J. H. S. V. 87.

57. COELOGYNE VENTRICOSA. *Pholidota ventricosa* Lindl. *Chelonanthera ventricosa* Bl.

58. COELOGYNE GIBBOSA. *Pholidota gibbosa* Lindl. *Chelonanthera gibbosa* Bl. — De Vriese Illustrat. t. I. f. 1. et tab. XI. f. 62.

59. COELOGYNE CONCHOIDEA. Huc: *Pholidota conchoidea* Lindl. B. Reg. XXVI. 1840. Misc. 198.

Spica pendula disticha imbricata, bracteis oblongis concavis apiculatis, sepalis lateralibus carina limbo aequali, epichilio 3 lobo laciniis lateralibus rotundatis, intermedio obsoleto, hypochilio utrinque in lobum ascendentem producto basi intus lineis 3 elevatis distantibus.

Manilla. Cuming. Knypersley. Very like P. imbricata, but its flowers are nearly twice as large, and the keels of the lateral flowers are so deep and concave, as to give the lower side of the flower the appearance of a bivalve shell.

60. COELOGYNE PHOLAS. Huc: *Pholidota Pholas* Rchb. fil. — „*Pholidota chinensis* Lindl. in Journ. Hort. Soc. II. 308. Misc. 16. 1847." Rchb. fil. in Bonpl. II. 250.

Pseudobulbi bipollicares oblongo tetragoni. Folia post anthesin prope semipedalia a basi lineari teretiuscula oblonga acuta trinervia anthesi abhuc valde tenuia margine undulata gemina. Pedunculus curvatus bracteis aequidistantibus cymbiformibus acutis scariosis. Flos illi Pholidotae imbricatae duplo major. Sepala oblonga acuta dorso carinata. Tepala linearia acuta. Labellum basi saccatum; trilobum; lobi laterales semiovati, lobus medius ovatus acutus. Gynostemium depresso anceps utrinque alatum, androclinii limbo erecto supra androclinium more Coelogynis; rostelli processus obtuse triangulus, limbus inferior foveae obtuse triangulae productus. Anthera obtuse triangula more generis quadrivalvis.

Hongkong. Hance! Seemann!

Sect. *CHINENSES.* Columna anguste alata. Labellum ligulatum.

61. COELOGYNE CHINENSIS. Huc: *Pholidota chinensis* Lindl. Hook. Lond. Journ. Bot. VII. p. 34.: Abundant on rocks, Victoria Peak, and other places. — Porro: Lindl Journ. Hor. Soc. II. 308.: „Coelogyne species with yellow flowers, from mountain side, Hongkong. This species has long been known from Chinese drawings, in which it is represented as bearing yellow flowers, with as they are pale greenish white, changing to white tinged with cinnamon. — Flowers in drooping racemes, not more than 2—3 inches long; opening earliest at the point of the raceme instead of the base."

Caespitosa rhizomate brevi, pseudobulbis obtuse tetragonis ovatis rugosis 1—2 phyllis, foliis oblongis undulatis acuminatis trinerviis, racemis brevibus recurvis, bracteis cucullatis membranaceis obtusis persistentibus, floribus centrifugis, sepalis ovatis, petalis linearibus, labello oblongo acuto basi concavo laevi apice refracto et quasi bilobo.

62. COELOGYNE CARNEA. Huc: *Pholidota carnea* Lindl. *Crinonia carnea* Bl.

63. COELOGYNE RECURVA. Huc: *Pholidota recurva* Lindl.

Obs. Forsan hic inserenda: *Pholidota membranacea:* Tejsm. et Binnendyk. Naturh. Tijdsch. vor Nederlandsch Ind. Deel V. 1853. p. 487 sq.

Pseudobulbis oblongo fusiformibus, foliis lanceolatis subplicatis, spi-

cis erectis foliis longioribus, floribus bifariis, bracteis ovato-acutiusculis, phyllis perigonii internis acutiusculis, labello lato-ovato-cuspidato.

Auf Bäumen in der Umgebung von Boitenzorg.

Sect. *UNDULATAE*. Columna stenoptera. Labellum breve trilobum.

64. COELOGYNE UNDULATA. Huc: *Pholidota undulata* L. O. 37. Misc. 19. — Wallich sent to Lodd. It has ovate pseudobulbs tapering to the base; a pair of narrow leaves; and a drooping raceme of small pale dull reddish flowers. Little beauty."

65. COELOGYNE RUBRA. Huc: *Pholidota rubra* Lindl.

Sect. *IMBRICATAE*. Columna platyptera. Labellum bene trilobum excavatum.

66. COELOGYNE IMBRICATA. Huc: *Pholidota imbricata* Lindl. B. Reg. XXI. 1777.:

Pseudobulbis oblongis corrugato-sulcatis obtusis, foliis solitariis oblongo lanceolatis plicatis acutis, spicis pendulis foliorum longitudine, bracteis membranaceis concavis acutis, spicis pendulis foliorum longitudine, sepalis lateralibus ovatis carinatis, labello subgloboso cucullato: lobis lateralibus parvis erectis intermedio bilobo: laciniis rotundatis.

P. imbricata Lindl. in Hook. Exot. Fl. t. 138. Lodd. Bot. Cab. t. 1934.

It has pointed bracts, yellowish flowers with a dash of violet, very strong long leaves and grows and flowers most freely. — Wight Ic. pl. Ind. Or. Vol. III. P. II. 1844. Courtallum. — also frequent in other stations, also in Ceylon.

67. COELOGYNE TRIOTOS. Huc: *Pholidota triotos* Rchb. fil.: aff. (*P.*) *imbricatae* labelli lobis lateralibus angustis sinu angusto a lobo medio reniformi sejunctis, carinis ternis a basi lobi medii, gynostemii alis angustis, androclinii processu postico et lateralibus anticis ligulatis retusis abbreviatis, alis lateralibus angustis, sepalis linearibus acutis supra basin marginis superioris angulatis. — Manilla. — hort. Schiller.

68. COELOGYNE PALLIDA. Huc: *Pholidota pallida* Lindl. Bot. Reg. XXI. sub 1777.: has very round blunt bracts, white flowers, smaller leaves, than P. imbricata and grows very weekly and unwillingly under ordinary circumstances. Huc Bot. Reg. 1213. Indica.

69. COELOGYNE CALCEATA. Huc: *Pholidota calceata* Rchb. fil.

70. COELOGYNE CROTALINA. Huc: *Pholidota crotalina* Rchb. fil.

71. COELOGYNE LORICATA. Huc: *Pholidota loricata* Rchb. fil.

Sect. *ARTICULATAE*. Columna alata. Labellum angustum, ante apicem dilatatum subito constrictum.

72. COELOGYNE ARTICULATA. Huc: *Pholidota articulata* L. O. 38. Bot. Reg. XXV. 1889. Misc. 57. — Introduced to Chatsworth by Mr. Gibson. Of no beauty. Its flowers are small and dirty white, with a little yellow. Differs in habit from Pholidota imbricata the stem being jointed like an Otochilus, and not pseudobulbous.

73. COELOGYNE KHASYANA. Huc: *Pholidota khasyana* Rchb. fil.

Sect. *CAMELOSTALIX*. Columna gracilis Otochili recurva. Labellum calceiforme.

74. COELOGYNE CAMELOSTALIX. Huc: *Pholidota camelostalix* Rchb. fil.

Tandem *Coelogyne suaveolens* ad *Coelogynas flaccidas* bene videtur pertinere. Huc: *Pholidota suaveolens* Lindl. Gardners Chronicle 1856. 372.:

P. pseudobulbis conicis obtuse angulatis diphyllis, foliis oblongis, racemo erecto flexuoso 10-floro floribus distantibus, bracteis linearibus convolutis pedicellis longioribus cito deciduis, sepalis ovatis subcarinatis petalisque conformibus angustioribus ecarinatis erectis, labello basi concavo oblongo lamina acuta deflexa crispa lineis 5 elevatis flexuosis.

This charming plant may be almost described as an Orchid in the disguise of a Lily

of the Valley, so alike are leaves, flowers, colour, stature, and fragrance. It is however a genuine Pholidota, approaching P. chinensis, but larger in all its parts, and bearing 5 elevated wavy lines on the surface of the lip. The pure white of the flowers changes by degrees to clear cinnamon brown.

For our knowledge of the species we are indebted to the Lord Bishop of Winchester, who forwarded a beautifully grown specimen from the garden at Farnham Castle, where its origin is unknown. It has been cultivated there many years, but flowered for the first time last year. It has much the appearance of a small Coelogyne, from which the pedicellate pollen masses and bilabiate dehiscence of the anther remove it.

Sect. *CYMBIDINA*. Labellum cum columna semiconnatum, lineis in disco geminis inter se trabeculis transversis conjunctis.

COELOGYNE CYMBIDIOIDES:

Pseudobulbo nitido sicco rugoso, foliis subcoriaceis lanceis acutatis basi petiolatis subbipedalibus, pedunculo dense squamis multis ochraceis obtuse acutis vestito, apice racemoso, bracteis lanceolatis triangulis ovaria aequantibus, labello cum columna semiconnato, antice trilobo, lobo medio retuso, lobis lateralibus rotundatis, lineis geminis in disco, per trabeculas transversas conjunctis.

Ovarium pedicellatum pollicare. Sepala naviculari ligulata. Dorsale dorso laeve, lateralia a medio apicem usque alato carinata. Tepala lanceolata obtuse acuta. Labellum cum gynostemio apice tantum libero in cylindrum connatum, apice libero trilobum; basi gibboso saccatulum infra tricarinatum (an tantum ex siccando? — saepe vidi), medio constrictum, apice ampliatum; lobus medius retusus emarginatus hinc denticulatus, lobi laterales breviores semiovati; carinae duae per discum ante lobos et postice abruptae, utrinque linea transversa clavata conjuncta, linea elevata longitudinali inter utramque; ansulis antice et postice transversis extrorsum utrinque abeuntibus a finibus carinarum. Gynostemium Coelogynarum apice libero utrinque semiovato dilatatum, apice trilobum: lobi laterales acuti, lobus medius obtusus emarginatus; rostellum bilobum dependens, supra foveam marginatum; lobi semiovati extus utroque latere revoluti. Anthera apice bidentata, vertice obtuse apiculata. Pollinia depresso pyriformia, per paria incumbentia. — Ex Moluccis.

1347 b. PANISEA *Lindl.* Folia I. 5.:

(LO., p. 44. Coelogynis sect.)

Sepala membranacea; lateralibus basi obtusis v. obliquis. Petala conformia, parum minora. Labellum indivisum, membranaceum, omnino calvum, basi sigmoideum, omnino liberum. Columna Coelogynis. Pollinia 4, collateralia, cereacea; caudicula glandulaque nullis (nisi materies pulverea saltem in quibusdam). Anthera membranacea, mobilis, bilocularis, infra apicem columnae inserta.

Herbae epiphytae Indicae, caespitosae, pseudobulbosae. Folia saepius graminea semper tenuia. Racemi radicales, erecti, 1—00-flori; bracteis membranaceis. Flores mediocres, pallidi.

The absence of crests or elevated lines from the lip of the plants now assembled under this name, together with the membraneous texture, the perfectly simple form and the sigmoid base of that organ, afford ample points of distinction from Coelogyne.

1. PANISEA PARVIFLORA Lindl. LO., p. 44. sub Coelogyne. Folia I. n. 1.:

P. foliis anguste ovalibus, racemis multifloris bracteis ovatis pedicellis brevioribus, sepalis petalisque erectis obtusiusculis, labello lineari-lanceolato.

Dendrobium demissum. Don Prodr. 34.

Wild in Nepal, and Gossain Than Wallich. (v. s. sp.)

2. PANISEA REFLEXA Lindl. Folia I. n. 2.:

P. foliis ovalibus solitariis longe petiolatis racemis nutantibus multo longioribus, bracteis ovatis setaceo-acuminatis pedicellis longioribus, sepalis petalisque reflexis, labello lineari spathulato versus basin margine crispo.

Androgyne. Griffith, Notul. III. 279.

Wild in Assam, on oaks, among species of Microstylis, Oberonia, etc., in Nov. Griffith; Khasia, at Myrung in woods Id. (v. s. sp.). — Pseudobulbs diaphanous, cellular-membranous; lip white, with yellow spots near the base Griffith. The same author mentions a pair of bracts to each flower, but this seems to be accidental.

3. PANISEA UNIFLORA Lindl. LO., p. 42, sub Coelogyne. Folia I. n. 4.

P. pseudobulbis bifoliis vaginis scariosis imbricatis, foliis gramineis, pedunculis unifloris ultra vaginas parum exsertis, sepalis carinatis petalisque patulis acutis, labello obovato obtuso, ovario angulato.

Wild in Nepal Wallich; Sikkim-Himalaya, in hot valleys J. D. Hooker, (v. s. sp. comm. cel. J. D. H.). — Of this rare plant I possess very imperfect specimens. The leaves in pairs, and the obovate lip are peculiar. According to Wallich's MSS. the lip has three orange-coloured blotches from which four slightly elevated lines descend; but I can now find in the Sikkim plant neither these lines nor the short falcate lateral lobes of the lip spoken of in LO. It is not improbable that some confusion exists among the specimens bearing this name. Of the original C. uniflora I never examined a flower.

4. PANISEA BILAMELLATA. Huc: *Coelogyne billamellata* Lindl. Folia I. V. sub C. n. 35.

C. foliis oblongis 5-nerviis racemo elongato flexuoso multifloro brevioribus, bracteis c. floribus simul decidentibus supra flores arctissime imbricatis, sepalis carinatis, petalis filiformibus, labelli angusti basi sigmoidei lobis lateralibus falcatis lamella duplici apice rotundata intermedio ovali bilineato apice crispo.

Wild in the Philippines Cuming, (v. s. sp.). — The broad leaves and 3-lobed lip with a double lamella distinguish this from C. longifolia, of which it has all the habit. I have only seen a single flower.

Obs. Characterem generis non quaero in labello laevi, sed in basi sigmoidea ejusdem. Pollinia certe incumbentia erunt.

Supplementum ad

DENDROCHILUM *Bl.* pag. 218.

Juvat hic addere species quasdam in herbariis triste latentes.

1. DENDROCHILUM MAGNUM;

Folio oblongo-lanceolato acuto basi attenuato, pedunculo nutanti (?) densifloro, bracteis infimis ovatis obtusis, superioribus oblongis acutis densis, sepalis triangulo lanceolatis, tepalis subaequalibus subcrenulatis, labello cuneato flabellato, basi utrinque unidentato, antice tridentato, dente medio maximo, ad basin utrinque obtuso angulo prosiliente inter hujus basin et dentes laterales breviores, lineis elevatis...., dentibus erectis ad mediam columnam. — Cuming. (Herb. Lindl.!)

2. DENDROCHILUM BRACTEOSUM.

Folio ligulato obtuse acuto, spica nutante, sepalis ovato triangulis, tepalis subaequalibus, labello oblongo antrorsum dilatato, dente uncato utrinque ante basin contractam lobi medii cuneati ovati apiculati, carina utrinque juxta marginem baseos; carina una inter utramque, antrorsum in duas divisa, columnae brachiis in apice columnae. (Herb. Lindl.)

3. DENDROCHILUM EROSUM: affine *Dendrochilo cornuto.*

Foliis longe petiolatim attenuatis oblongo-lanceolatis acutis in bulbo cylindraceo, squamis punctatis vestito, pedunculo longe nudo apice spicato, bracteis ovalis acutis, sepalis triangulis apiculatis, tepalis paulo latioribus, labello rhombeo seu trapezoideo, omnino denticulato, callo in basi transverso utrinque antrorsum prosiliente, columnae brachiis e media columna progredientibus, androclinii limbo bilobo seu retuso.

Java. Comm. Lindl. sub Nr. 56.

1348b. **BOLBOPHYLLARIA** *Rchb fil.*

in v. Schldl. B. Z. 1852. p. 934:

Perigonii phyllum summum oblongo-acutum galeatum, ph. l. ext. basi oblique connata, triangula, l. i. squamaeformia, ovata, acuta, multo breviora, phyllulis triangulis basi utrinque obtusatis superpositis cum marginibus phyllorum externorum imbricantibus, labellum brevissime unguiculatum, triquetrum, acutum inferne medio serratum; gynostemium abbreviatum, apice utrinque unidentatum; pollinia inaequalia, per paria incumbentia, superpositis duplo majoribus.

a. Rhachis clavata.

1. BOLBOPHYLLARIA BRACTEOLATA Rchb. fil. l. c. (ad Bolbophyllum bracteolatum Lindl. B. R. XXIV. 1838. 57.).

2. BOLBOPHYLLARIA OERSTEDII Rchb. fil. in Bonpl. III. 223.:

Similis Bolbophyllo clavato Thouars tepalis triangulis nec linearibus, labello compresso cordato acuto limboso, per discum unicarinato. Pseudobulbus tetragonus ultrapollicaris diphyllus. Folia ligulata acuta — quadripollicaria, medio prope pollicem lata. Pedunculus basi paucivaginatus, superne clavato incrassatus multiflorus. Bracteae triangulae acutae seu acuminatae ovariis subaequales membranaceae siccae violaceo subirrorata visae. Sepala triangula acuminata. Gynostemium breve apice intrusum antice bifalcatum. Commissura inter sepalum summum et sepala lateralia a geneticis squamulis basi tecta.

Ad Esquipulas in Segovia. Oersted.

3. BOLBOPHYLLARIA PACHYRRHACHIS Rchb. fil. — *Pleurothallis? pachyrachis* A. Rich. in Ramon de Sagra Cub. 234. Vol. I. Tab. 74:

Pseudobulbis ovoideo compressis, squamis vestitis, apice 1—2 phyllis; foliis elliptico-oblongis obtusis, coriaceis, subtus subcarinatis; scapo radicali simplici, spithamaeo, foliis cum pseudobulbo longiori, squamato, in parte florifera incrassato-carnoso; floribus sessilibus, parvulis, spicatis, squamis basi lata semiovalibus concavis acutis; sepalo supremo concavo, apice longissime apiculato, lateralibus basi inter se coalitis, obliquis, recurvis, longissime acuminatis; internis (petalis) multo brevioribus obovalibus obtusis, tenuissimis, utrinque lateri gynostemii applicatis; basi externe appendice triangulari auctis, angulis inferioribus in nervos seu alas in ovario decurrentibus; labello unguiculato gynoste-

mio parallelo, ejus basi longe productae affixo, tertia parte inferiori erecto, caeterum explanato crasso, carnoso, linguaeformi obtuso; gynostemio oblongo, clavato, ad partem superiorem antice longe bidentato.

Crescit in cortice arborum sylvarum ins. Cuba.

4. BOLBOPHYLLARIA SORDIDA Rchb. fil. Huc *Bolbophyll. sordidum* Lindl. B. Reg. XXVI. 1840. Misc. 217.

Pseudobulbis tetragonis, ..., spica carnosa acuminata conica, floribus sessilibus carnosissimis, bracteis ovatis obtusis adpressis ovario longioribus, sepalis ovatis acutissimis, petalis linearibus apice rotundatis, labello unguiculato ovato plano convexo basi auriculato, columna utrinque biseta.

Guatemala, near Bolb. clavatum of Thouars. It grows with a spike 6" long, upon a scape about half as long again. The flowers are very fleshly, a dull olive brown externally, but brightly mottled with purple in the inside. I owe my knowedge to Mr. Bateman.

Obs. Bolbophyllum clavatum P. Th. certe huc pertinebit.

b. Rhachis filiformis.

5. BOLBOPHYLLARIA BISETA Rchb. fil. Huc *Bolbophyllum bisetum* Lindl. Ann. Nat. Hist. X. 1842. 186.

Pseudobulbis inverse pyriformibus, folio lanceolato basi angustato spica paulo longiore, scapi filiformis erecta vaginis 3 distantibus laxis acutis, spica densa brevi nutante, sepalis alte carinatis, lateralibus connatis semiorbicularibus, dorsali oblongo minore, petalis spathulatis unguiculatis, labello convexo linguiformi villoso basi cordato, columnae dentibus setaceis, bracteis filiformibus sub flore.

Khasyia Griffith. A very singular plant, with flowers as large as a small pea, and very deeply keeled sepals.

1348c. XIPHIZUSA *Rchb. fil.*

v. Mohl et v. Schldl. B. Z. 1852. 919.

Perigonii phylla externa membranacea elongata, lateralia nunc omnino connata, p. ph. l. i. abbreviata. Labellum cum basi gynostemii producta abrupte articulatum, trilobum, lobi laterales basi erecto-auriculati, per lineam mediam carnoso elevati, lobus medius ligulatus, cum lobis lateralibus elongatis plicula transversa (fere more Euothonaeae) articulatum. Gynostemium liberum: androclinium postice (an in omnibus?) unilobum, utroque margine antico in subulam erectiusculam productum, rostellum prominens supra foveam stigmaticam oblongam, rotundato-retusum; denticulus utrinque in margine gynostemii pone foveam stigmaticam. Anthera rotunda, mitrata, apice seu postice apiculato-mitrata, antice excisa, obsolete bilocularis. Pollinia duo, oblongo-cuneata, apice nunc bilobula.

(Char. ad X. chloropteram, comparatis char. X. gladiatae [Did. g. Lindl.] et X. Weddelii [Did. W. Lindl.]).

1. XIPHIZUSA CHLOROPTERA Rchb. fil. l. c.

Pedunculo nutante, filiformi, paucifloro, p. ph. summo ligulato pandurato acuto, p. lateralibus externis subaequalibus apicem usque connatis, paulo latioribus, (flavoviridibus), p. l. i. ovatis acutis margine pulcherrime papilloso-ciliatis, (flaveolis purpureo-guttulatis); labello trilobo elongato, lobis lateralibus elongatis, inferne medio carinatis postice utrinque erecto-auriculatis, lobo medio lineari-ligulato acutiu-

sculo glabro, mobili, trinervi (purpureo), gynostemio ph. l. i. non aequante.

Bolbophyllum chloropterum Rchb. fil.

Brasilia. — Siquidem ego, dum tot genera Blumeana, imo Lindleyana sepono, genus meum servo, non ex vili egoismo, sed propter labelli miram fabricam facio, quae ab omnibus Bolbophyllis lamina medio sigmoideo inflexa recedit. Quod in nullis Lindleyanis. Didactylibus cerni potest, quo fit, ut conjunctio Didactylis gladiatae cum Bolbophyllo meo chloroptero omnino sit falsa.

1848 d. BOLBOPHYLLOPSIS *Rchb. fil.*

in v. Mohl et v. Schldl. B. Z. 1852. 933.

Perigonium carnoso-membranaceum, prope bilabiatum, phyllum supremum oblongum, galeatum, phylla lateralia externa basi ima connata, dein ligulata, deflexa, superiore multo longiora, interstitia inter summum et laterale magna; ph. l. i. oblonga, acuta, supremo p. breviora, linea antrorsa triangula in ima basi incrassata, lineolae apice libero (prope more Bolb. setigeri); labellum unguiculatum, triangulo-ligulatum, postice obtuse humeratum, linea media per longitudinem bicarinata, limbus argutus, gynostemium humile, apice utrinque oblique descendens; rostellum retusum, anthera depressa, mitrata, bilocularis, connectivum latum; pollinia 2, obtuse triangula, a lateribus compressa, sessilia in glandula spuria transverse pandurata.

1. BOLBOPHYLLOPSIS MACULOSA Rchb. fil. Huc: *Bolbophyllopsis Morphologorum* Rchb. fil. l. c.:

Blüthenstiele schlank, unten 2-scheidig, zu oberst zwei längliche, spitze Vorblätter sehr nahe beieinander. Fruchtknoten langgestielt. Blüthe einzeln, braun mit rothen Punkten, wenig kleiner als bei Trigonidium ringens.

Huc: *Cirrhopetalum maculosum* Lindl. Bot. Reg. 1841. misc. 173. — Bot. Reg. 1843. sub 49.

Floribus geminis solitariisque, sepalo supremo oblongo acuto, lateralibus lineari-oblongis obtusis margine anteriore pone basin uniplicato, petalis sepalo supremo brevioribus oblongis obtusis, labello ovato obtuso convexo apice recurvo, columna bidentata? (polliniis 4 subaequalibus).

East Indies. Wallich (158) Loddiges. — This is a species with the habit of Bolbophyllum affine, or leopardinum, but with the long lateral sepals of a Cirrhopetalum. It has the flower-stalks and flowers of a very pale green, finely speckled with dull purple. — The lateral sepals are nearly 1" long, and have a single fold on their inner margin near the base.

1352. BOLBOPHYLLUM *Thouars.*

Orch. Afric. tab. 97—110.

Uniflora:

§. *Sarcopodium:* Lindl. Folia I. Fasc. 2. Jan. 1853:

SARCOPODIUM Lindley, in Paxton's Flower Garden: gleanings, n. 199.

Sepala ringentia, coriacea vel carnosa, lateralibus basi productis columnae pedi adnatis dorsali aequalibus vel minoribus. Petala minora. Labellum nanum, cum basi producta columnae articulatum, carnosum, mobile, canaliculatum, basi subcordatum, nunc lamellis 3 brevioribus

auctum, nunc inappendiculatum. Columna nana, semiteres, mutica, basi in pedem producta. Stigma fovea sub rostello excavata. Pollinia 4, collateralia, 00 00, subaequalia, cereacea, omnino libera. Anthera 2-locularis.

Herbae epiphytae, Asiae tropicae, pseudobulbosae. Folia solitaria, coriacea. Flores solitarii vel pauci, conspicui, pedunculis radicalibus.

A genus intermediate between Dendrobium and Bolbophyllum, having the large flowers of the former, and the peculiar creeping habit of the latter. The species agree with Dendrobium in having four nearly equal pollen-masses, and a hornless column; but they have coriaceous, not thin half-transparent flowers, and a tough leathery lip, enlarged not contracted at the base. If they had a caudicle and gland to their pollen-masses, they would almost be Asiatic Maxillarias. Their flowers form neither horn nor spur, but are simply inflated and expanded at the base of the sepals. One of them has been published by Dr. Blume as an Ephippium, a group which he now regards as a mere form of Bolbophyllum. That generic name cannot be conveniently applied here; because all the other species formerly collected under it belong either to Bolbophyllum, or Cirrhopetalum, or to some Vandeous race, for which alone, if it proves hereafter to be distinct, should the name Ephippium be retained.

§ 1. Labellum concavum 3-lamellatum.

1. BOLBOPHYLLUM AMPLUM Rchb. fil. Huc: Lindl. l. c.: *Sarcopodium amplum* Lindley, in Paxton, l. c.

S. pseudobulbis ovatis squamatis diphyllis, foliis oblongis emarginatis petiolatis, pedunculo bracteis petaloideis multo longiore, sepalis ovatis acuminatis obtusis, petalis angustioribus, labello cordato sessili trilobo basi lamellato: lobis lateralibus abbreviatis rotundatis intermedio ovato acuto.

Dendrobium amplum. Wallich Cat., n. 2001; Pl. As. rar., vol. I., p. 25, t. 29; LO., p. 74; Griffith Ic., t. 304; Notulae, p. 307.

Wild in Pundua and Nepal; on Mount Sheopore, on stones and rocks in moist shady situations Wallich; on rocks, in the valleys of the Sikkim Himalaya, at 4—5000 feet J. D. Hooker; Khasia hills, at Churra Griffith; at an elevation of 4—5000 feet Hooker and Thomson, (v. s. sp.). — Flowers straw-coloured, spotted internally, three inches wide when fully open. Lip with three lamellae in the middle, of which the central one is shorter than the others; its middle lobe deep purple. Griffith observed two protuberances inside the lower edge of the stigma.

2. BOLBOPHYLLUM FUSCESCENS Rchb. fil. Huc: Lndl. l. c.: *Scarpodium fuscescens*.

S. pseudobulbis ovatis acuminatis squamatis diphyllis, foliis oblongo-lanceolatis emarginatis petiolatis apice semitortis, pedunculo bracteis membranaceis multo longiore sepalis oblongo-lanceolatis acuminatissimis reflexis, petalis angustissimis, labello trilobo sessili basi lamellato: lobis lateralibus oblongis columna longioribus intermedio ovato acuminato medio carnoso.

Dendrobium fuscescens. Griffith Ic., t. 309, not. p. 308.

Wild on the Khasia hills T. Lobb; 4—5000 feet — J. D. Hooker and R. Thomson; near Churra Griffith, 1123, (s. s. sp.). — Middle of lip fragile at the base, breaking off readily at that situation. Sepals one and a half inch long; petals about a line shorter; both brownish flesh-colour. Lateral lobes of lip chesnut-colour; middle lobe pale chesnut, purplish towards the base; crests white. Column with two pale orange spots in front. Griffith. Very near the last, from which Griffith first distinguished it Both have a strong tooth at the back of the anther-bed.

3. BOLBOPHYLLUM ROTUNDATUM Rchb. fil. Lindl. l. c.: *Sarcopodium rotundatum*.

S. pseudobulbis ovatis squamatis diphyllis, foliis ovalibus obtusis emarginatis petiolatis, pedunculo bracteis membranaceis breviore, sepalis petalisque carnosis ovatis acutis erectis aequalibus, labello trilobo sessili basi lamellato: lobis rotundatis lateralibus minoribus.

Wild in the Sikkim-Himalaya, at the elevation of 6000 feet J. D. Hooker, (v. s. sp. comm. ecl. inv.). — Very like S. fuscescens, but the foliage is broader; the peduncles are much shorter than the bracts which envelope them; the lateral sepals are not acuminate, and the dorsal tooth of the column is wider.

§ 2. Labellum canaliculatum inappendiculatum.

4. BOLBOPHYLLUM GRANDIFLORUM Blume Rumphia IV. 42. — Huc: Lindl. l. c.: *Sarcopodium grandiflorum.*

S. pseudobulbis prismaticis, folio lanceolato vel retuso, scapo vaginis 2 maximis aucto, sepalis maximis inaequalibus dorsali latissimo obtuso lateralibus acuminatissimis supra medium refractis, petalis nanis acutis, acutis, labello linguiformi obtuso compresso.

Bolbophyllum grandiflorum Blume Rumphia IV. p. 42. — *Ephippium grandiflorum* Id., tt. 195 and 199.

Wild in woops on the coast of New Guinea Blume. — Flowers the largest of the genus, above eight inches in diameter, pale yellowish green. Scape six inches high. The dorsal sepal brownish above the base, with a strong pallid netting; the others not netted. Lip glaucous spotted with sanguine. Blume.

5. BOLBOPHYLLUM LOBBII Lindl. B. Reg. — Huc: Lindl. l. c.: *Sarcopodium Lobbii*, Lindley, in Paxton l. c. ic. 98.

S. folio petiolato obovato-oblongo coriaceo, pedunculo folio breviore nudo basi subglanduloso e bracteis squamaeformibus cucullatis falcatis subglandulosis erumpente, sepalis oblongis acutis lateralibus falcatis, petalis conformibus minoribus reflexis, labello longe unguiculato cordato ovato acuto canaliculato apice recurvo.

Sestochilus Hb. Hooker. — *Bolbophyllum Lobbii* Lindley, in Bot. Reg. 1847, sub t. 29; Bot. Mag. t. 4532.

Wild in Java T. Lobb, (v. v. et s. sp.). — Flowers full four inches across, yellow, shaded with cinnamon, spotted with light brown, and speckled outside with brown-purple. Pseudobulbs ovate, nearly as large as a pigeon's egg. Scape yellowish, spotted with brown, shorter than the leaf, its base sheathed with imbricated, convex, spotted scales. Sepals deep yellow, the upper one externally marked with purple spots running in lines; the lateral ones falcate, streakd and clouded with purple. Petals resembling the upper sepal, but smaller and streaked with purple lines. Lip cordate-ovate, acuminate, reflexed, yellow, with minute orange dots.

Huc porro: *Sarcopodium Lobbii ?* var. *Henshallii* Henfr. gard. mag. of bot. III. 209 c. icone. — Lem. jard. fl. tab. 188.

Sarcopodium Lobbii Lindl. Lem. Jard. fl. tab. 68. — *Bolbophyllum Henshallii* G. Chronicle 1852. p. 422.

6. BOLBOPHYLLUM MACRANTHUM Lindl. Huc: Lindl. l. c.: *Sarcopodium macranthum* Lindley in Paxton l. c.

S. foliis petiolatis oblongis planis coriaceis, pedunculo petiolo longiore, sepalo dorsali plano ovato acuminato lateralibus petalisque subconformibus hinc tortis, labello minimo unguiculato subtrilobo acuminato.

Bolbophyllum macranthum Lindley in Bot. Reg. 1844 t. 13.

Wild at Singapore Loddiges (v. v. c.). — Allied to both B. leopardinum and affine; from each it differs in its much more fleshy and larger flowers, whose stalk is considerably longer than the petiole. The flowers expand so flat, that they seem as if

they had been pressed. In the centre, they are a pale lemon-colour, but towards the tips they are much mottled with dark chocolate-coloured spots.

7. BOLBOPHYLLUM CHEIRI Lindl. Huc: Lindl. l. c.: *Sarcopodium Cheiri* Lindley in Paxton l. c.

S. foliis oblongis coriaceis basi canaliculatis apice emarginatis, sepalis elongatis lanceolatis, lateralibus basi ventricosis patalisque e lata basi linearibus acuminatis in manus speciem velut digiti conniventibus, labello basi ovato concavo apice longe rostrato.

Bolbophyllum Cheiri Lindley in Bot. Reg. 1844, misc. 66.

Wild in Manilla Loddiges (v. v. c.). — Sepals an inch and a half long, a clear olive green, marked with brownish stripes. The lip jointed so loosely with its support, that it falls forward every time the flower is waved by the wind. Both sepals and petals are so arranged that they converge much like the human fingers, when they are brought together without being bent.

8. BOLBOPHYLLUM MEGALANTHUM Griff. Huc: Lindl. l. c.: *Sarcopodium megalanthum.*

S. pseudobulbis fere obsoletis monophyllis, foliis oblongis crassis emarginatis basi canaliculatis marginibus recurvis, pedunculo stricto aphyllo unifloro basi squamato, sepalis oblongo-linearibus acuminatis, lateralibus invicem falcatis basi auriculatis, petalis linearibus acuminatis incurvis, labelli lobis lateralibus erectis dentiformibus intermedio lineari longe rostrato.

Bolbophyllum megalanthum Griffith Ic. t. 292; Notulae p. 186.

Wild in Malacca; on trees and rocks at Pulo Bissar, common — Griffith. — Flowers very large, light brown with purple spots and dots. The lateral sepals are uppermost and cross each other like a pair of scythe blades. I have seen no specimen.

9. BOLBOPHYLLUM REINWARDTII Rchb. fil. Huc: Lindl. l. c.: *Sarcopodium Reinwardtii.*

S. pseudobulbis sulcatis cylindraceis, folio oblongo petiolato acuto multinervi, pedunculo pseudobulbis aequali trivaginato, sepalis ovatis acuminatissimis, petalis conformibus setaceo-acuminatis, labello ovato acuminato.

Dendrobium grandiflorum Reinwardt ic. ined.

Wild in Java Reinwardt; T. Lobb 174*(v. s. sp. et ic. pict.). — There are two varieties known to me, one with leaves eight and a half inches by three and a half inches — Reinwardt; the other with leaves six and a half inches by one and three-eighths of an inch, and thinner — T. Lobb. Flowers greenish, one and three-forths of an inch from tip to tip of sepals. Column, column-foot, and lip, crimson.

10. BOLBOPHYLLUM PILEATUM Lindl. Huc: Lindl. l. c.: *Sarcopodium pileatum.*

S. foliis ...., floribus solitariis glabris, sepalis oblongis obtusis lateralibus convexis longioribus, petalis conformibus duplo angustioribus, labello linguiformi obtuso laevi pone basin bijugato inter juga subaspera nectare lucido obducto, columna tereti mutica, anthera conica.

Bolbophyllum pileatum Lindley in Bot. Reg. 1844, misc. 73.

Wild at Singapore Loddiges (v. v. c.). — Flower large yellow-ochre-coloured, with a nearly flat moveable labellum stained with two purple ridges near the base, between which is a little bright yellow valley, secreting a mucilaginous matter along its whole length. The anther is conical, like an old-fashioned high-crowned hat.

11. BOLBOPHYLLUM AFFINE Wall. Cat. Huc: Lindl. l. c.: *Sarcopodium affine* Lindley in Paxton l. c.

S. pseudobulbis oblongis teretibus, foliis coriaceis rigidis oblongis solitariis petiolatis emarginatis, floribus solitariis, sepalis petalisque

aequalibus ovato-lanceolatis, labello carnoso ovato-lanceolato obtuso integerrimo.

Bolbophyllum affine Wallich Cat. n. 1982; LO. p. 48.

Wild in Nepal Wallich; Khasia Mountains, at the elevation of 3000 feet on Gordonia Hooker and Thomson, (v. s. sp.). — Nearly related to the following, with which it agrees in the position and size of its flowers, but it differs from it in their being solitary, in the more lanceolate figure of the floral envelopes, and especially in the petals being as long as the sepals. (Perianth white, streaked with red. Labellum red-brown. Column yellow. Hooker and Thomson.)

12. BOLBOPHYLLUM LEOPARDINUM Lindl. Wall. Cat. Huc: Lindl. l. c.: *Sarcopodium leopardinum* Lindley in Paxton l. c.

S. pseudobulbis caespitosis ovato-oblongis, foliis coriaceis rigidis oblongis solitariis petiolatis, floribus fasciculatis globoso-campanulatis, sepalis ovatis guttatis subaequalibus, petalis minoribus conformibus, labello carnoso ovato obtuso integerrimo basi utrinque denticulato.

Dendrobium leopardinum Wallich Tentamen vol. I. p. 39. t. 28. — *Bolbophyllum leopardinum* Lindley in Wall. Cat. n. 1981.

Wild in the Himalaya; upon Mount Chandaghiry, on the trunks of trees Wallich; Khasia Mountains, 4—6000 feet Hooker and Thomson (v. s. sp.). — Flowers globose, pale yellowish brown, closely dotted with purple. Lip deep purple.

13. BOLBOPHYLLUM GRIFFITHII Rchb. fil. Huc: Lindl. l. c.: *Sarcopodium Griffithii.*

S. pseudobulbis oblongis, foliis ovalibus emarginatis, bractea parva membranacea obtusa cucullata, floribus subglobosis, sepalis petalisque minoribus ovatis concavis, labello ovato.

Bolbopylli sp. Griffith Ic. t. 296. f. 2.

Wild on the Khasia hills of India T. Lobb; at 5000 feet Hooker and Thomson; Myrung wood Griffith (v. s. sp.). — Flower fleshy, whitish, with numerous rosy-purple blotches. Lip white, tremulous, blotched in the same way. Column white. — Griffith. The figure above quoted has nothing to do with the reference given by Griffith's editor at p. 294 of his „Notulae." It is no doubt the Dendrobium Bolbophylli of that author's „Itinerary Notes," p. 65 n. 1019. The specimen from T. Lobb, communicated by Messrs. Veitch, has but one flower, which I am unable to examine.

14. BOLBOPHYLLUM UNIFLORUM Griff. Huc: Lindl. l. c.: *Sarcopodium uniflorum.*

S. pseudobulbis angustis oblongis teretibus monophyllis, foliis lineari-oblongis coriaceis emarginatis, pedunculo unifloro filiformi pendulo, sepalo dorsali oblongo lateralibus recurvis duplo majore, petalis lineari-spathulatis revolutis, labello trilobo basi calloso auriculato lobo intermedio majore ovato.

Bolbophyllum uniflorum Griffith Ic. t. 295; Itin. p. 110.

Wild in Bootan; on the Mishmee hills towards Lung; on the mango-tree on Dewangiri Griffith (v. s. sp.). — „Sepals orange-colour, with red spots inside; petals of the same colour at the base, whitish at the lip. Lip tongue-shaped, sanguine at the point." Griffith. The small cartilaginous ears at the base of the lip, and the great dorsal sepal, are very remarkable. Griffith's figure of them is not good.

15. BOLBOPHYLLUM CORNUTUM Rchb. fil. Huc: *Ephippium cornutum* Bl.

In tot floribus ne vestigium quidem caudiculae reperi.

Icones nuper in Java confectae eam bene monstrant. Sed illae omnes videntur religiose ad Blumei Tabellas confectae. Ita e. gr. „Cistellae" (Geodori) falsa analysis ibi iterum offertur.

Obs. Sarcopodium triadenium Lindl. et Sarcopodium striatum Lindl. sub specibus spicatis inveniuntur.

§. *Cirrhopetala uniflora*: sepala lateralia longe extensa.

16. BOLBOPHYLLUM ANTENNIFERUM. Huc: *Cirrhopetalum antenniferum* Lindl. Bot. Reg. 1843. sub. t. 49.

Folio ....., scapo unifloro, sepalo dorsali lineari-lanceolato abrupte acuto, lateralibus cohaerentibus canaliculatis falcatis hac multum longioribus, petalis in setam tenuissimam apice clavatam productis.

Philippines (Cuming). — The flowers the largest in the Genus, the back sepal 1½" in length. I have only seen a single flower.

17. BOLBOPHYLLUM MAXILLARE. Huc: *Cirrhopetalum maxillare* Lindl. Bot. Reg. 43. sub t. 49.

Folio oblongo scapi uniflori longitudine, sepalo dorsali setaceo-acuminato ciliato lateralibus obtuse acuminatis disjunctis, petalis acutissimis.

Philippines (Cuming). — Upper sepal 9‴, lateral 17‴ long. Petals about 1½‴

§. *Oxysepala:* floribus hyalinis inter squamas abscònditis.

18. BOLBOPHYLLUM CLANDESTINUM Lindl. B. Reg. XXVII. 1841. Misc. 166:

Rhizomate repente squamis membranaceis cucullatis vestito distanter pseudobulbifero, pseudobulbis minimis 1—2 phyllis, foliis mucronulatis oblongis carnosis dorso convexis, floribus minimis geminis e squamis rhizomatis, sepalis clausis ovatis aequalibus in setam mollem productis, petalis ovalibus obtusis, labello anguste ovato obtuso laevi, anthera 1-loculari, poll. 2.

Curious, inconspicuous Orch. from Sincapore Lodd. flw. It is a form of the genus Bolbophyllum in which the pseudobulbs almost disappear, and the flowers are only just protruded from among the withered scales, with which the rhizoma is covered. All. to tortuosum, a plant, which I never have seen. The minute flowers are pale straw-col. with the ends of the same lengthend into soft yellow bristles. The leaves are hard, thick, and rounded at the back. The whole habit of the plant is that of some creaping Fern, such as Marginaria (Polypodium) piloselloides.

Huc: *Oxysepala* R. W. Ic. V. I. 1367:

Sepals equal, ovate, long subulate acuminate, subconnate at the base. Petals narrow, linear, obtuse, scarcely half the length of the sepals. Lip unguiculate, cordate lanceolate, entire, ecalcarate, reticulated with the prolonged base of the short column. Stamen posterior, free to near the base, anther globose. Scandent, ramous, jointed epiphytes; stems clothed with sheathing scariose scales from beneath which the flowers protrude. Pseudobulbs scattered on the branches, 1 leaved. Leaves obovato-elliptic, obtuse, emarginate, coriaceous. Flowers short pedicelled, one or two from each scale covered at the base with minute scales and furnished at the apex with a large, somewhat boatshaped ovate bract. Sepals membranous (in dried specimens translucent) much attenuated towards the point.

This is an interesting plant from its so clearly explaining the structure of the column on orchideous plants through the separation of the stamen from the stigma. In most Orchids these two sexual organs are united into a single body, with the variously formed anther laying on the top. Here the two sets of organ are respectively free and distant, as in other bisexual flowers. I cannot refer it to any existing genus, though I think it approaches, Cochlia in some points, which however has not, so far as I can learn from the character, the free stamens of my plant.

Oxysepala ovalifolia R. W. Griffith. Label lost. Malacca? Khassya?

Obs. Huc locorum, forsan ad ipsum B. clandestinum Lindl. pertinebit:

BOLBOPHYLLUM MEMBRANACEUM Tejsmann et Binnendik Naturk. Tijdschr. vor Nederl. Ind. Deel V. 1853.

Bulbis minutis approximatis, foliis solitariis ovatis acutis, floribus solitariis minutis, pedunculis bulbis aequalibus, sepalo supremo luteo cuspidato, lateralibus subsulcatis et labello atropurpureis, petalis minutis membranaceis.

Salak.

§. *Napelli:* flore majusculo „postico".

19. BOLBOPHYLLUM NAPELLI Lindl. Ann. Nat. Hist. X 1842. pag. 185.

Pseudobulbis conicis, folio oblongo obtuso, scapo unifloro, folii longitudine, apice ipso sub flore bibracteato, bracteis setaceis inaequalibus sepalis lateralibus dorsalibus galeatis ovatis acutis, petalis conformibus paulo minoribus, labello lineari obtuse unguiculato, columna basi utrinque in dentem acuminatum producta.

Brazil, Descourtilz, Miers. — Flower with violet stripes, ½" long. In form it resembles the flower of Aconitum Napellus, which suggested to Mr. Descourtilz its name.

§. *Pygmaeum:* flore parvulo coriaceo brevi antico.

20. BOLBOPHYLLUM PYGMAEUM Lindl. O. Huc: Hook. fil. Fl. of New Zeel.: „troughout the island, as far south as Dusky Bay: Banks and Solander etc. Nat. name „Piri-Piri" Col. — B. Mag. Comp. II. 377: New Zealand. — New Zealand (North. Island). At Wangaroa and Hokianga, on Avicennia tomentosa and Vitex litoralis, C. — trees of the sea shore Waimate, remote from the sea, on salt timber. 1831. R. Cunningham.

§. *Trias:* flore majusculo antico, sepalis aequalibus, lateralibus supra dorsale imbricantibus.

21. BOLBOPHYLLUM OBLONGUM Rchb. fil. MSS.:

Labello oblongo medio utrinque antrorsum dentato, columna apice retusa.

Trias oblonga L. O. 60. et ? *Trias ovata* L. O. 60.?

22. BOLBOPHYLLUM MOULMEINENSE:

Labello oblongo, edentulo, columna apice tridentata.

Pseudobulbi breve conici monophylli. Folia oblonga acuta. Pedunculi subaequilongi apice uniflori. Sepala oblongo-triangula. Tepala ligulata acuta abbreviata. Labellum oblongum complicatum. Columna apice triloba.

Moulmein. Griffith. (herb. Lindl.)

Obs. Num huc pertinebit haec litteraria miseries?:

Cirrhopetalum compressum B. Reg. XXIX. 1843. sub 49. (Ephippium uniflorum Blume Bijdr. p. 309.)

„Bulbis oblongis compressis, foliis lato-lanceolatis, pedunculo unifloro, sepalis ovatis acuminatis."

Java. — Probably of this genus, since it is associated by Blume with his Eph. ciliatum.

Spicata seu Racemosa.

I. Rhachis filiformis.

aa. Flores a bracteis occulti.

23. BOLBOPHYLLUM IMBRICATUM Lindl. Bot. Reg. XXVII. 1841. Misc. 65.

Scapo erecto distanter obtuse vaginato, spica fusiformi subtetragona vix *compressa*, bracteis ovatis obtusis imbricatis demum marcescentibus,

alabastro cernuto pubescente, sepalo supremo lineari lateralibus ovalibus brevioribus, petalis filiformibus hirsutis, labello ovato basi pectinato.

Sierra Leone (171) Lodd. — It approaches closely to the Mauritius B. occultum, and with it and some others form an analogy with Megaclinium. The flower stem is a foot high, stout and nearly erect; the flowers are deep dull purple. Like many others of the genus, the spiral vessels are extremely strong, and tough in the sepals and which is very remarkable, they are of a rich purple colour. I am not at present acquainted with any similar case, for in general the spiral thread of the tracheae is peculiarly colourless and silvery.

bb. Flores a bracteis liberi.

α. Columna utrinque bidentata.

Huc descriptio genetica Lindleyi Folia I. 1. Oct. 1852:

DIDACTYLE.

Sepala coriacea, subaequalia: lateralibus basi obliquis nunc connatis. Petala nana, libera. Labellum cum basi producta columnae articulatum, 3-lobum, per axin in jugum carnosum sulcatum vulviforme elevatum. Columna libera, semiteres, apice in cirrhos 2 (staminodia) extensa, basi in pedem producta, infra apicem digitis duobus marginalibus aucta. Pollinia 4, ceracea, libera: duobus interioribus minutis. Anthera saepius rostrata. Herbae epiphytae, Americae tropicae, pseudobulbosae. Folia coriacea. Scapi radicales, apice tantum spicati; bracteis herbaceis.

Among the numerous forms which have been referred to Bolbophyllum, this seems especially to demand separation as a peculiar genus, on account of its somewhat peculiar habit, and very singular column and lip. The column, in addition to the two cirrhi essential to Bolbophyllum, has two others a little lower down, and projecting towards the lip like a pair of fingers. The lip has a large fleshy ridge running along its middle, and in the species I have examined, slit from end to end: that is to say, the two customary lateral lamellae are united in front, and are so deep as to produce this appearance.

24. BOLBOPHYLLUM EXALTATUM Lindl. Ann. Nat. Hist. Huc: *Didactyle exaltata* Lindl. l. c.

D. pseudobulbo tetragono folio oblongo obtuso paulo breviore, scapo vaginato stricto longissimo (pedali et ultra), vaginis obtusis supremis laxioribus, spica multiflora, bracteis ovatis concavis acutis herbaceis, sepalis ovatis acuminatis, petalis oblongis ciliatis, labello obovato obtuso pubescente, columnae dentibus supremis cirrhosis digitis brevibus incurvis, anthera mucronata.

Bolbophyllum exaltatum Lindley, in Ann. Nat. Hist., vol. X. p. 186.

Wild in Guayana — Schomburgk, (v. s. sp.). — The leaf of this remarkable plant is not much more than an inch long, while the scape is more than a foot high. The flowers are purple, and half concealed by the large permanent bracts.

25. BOLBOPHYLLUM ANTENNIFERUM Rchb. fil. Huc: *Didactyle antennifera* Lindl. l. c.

D. pseudobulbo tetraptero, folio oblongo plano coriaceo apice recurvo scapo triplo breviore, spica densa nutante, bracteis oblongis obtusis ovario longioribus, sepalis acuminatis, petalis ovato-oblongis ciliatis, labello oblongo basi ciliato auriculis 2 membranaceis apice rotundato dentato, columnae dentibus supremis longissimis porrectis digitis subulatis.

Wild in Brazil: Minas Geräes — Widgren, 764, (v. s. sp. comm. cel. Rchb. fil.). — Resembles D. exaltata, but the lip is smooth except at the base, and its end is

strongly toothed. The fleshy ridge in the middle of the lip is singularly large. The teeth of the column are as long as the column itself, its foot included.

26. BOLBOPHYLLUM MERIDENSE Rchb. fil. Huc: *Didactyle meridensis* Lindl. l. c.

D. pseudobulbo ovato, folio parvo oblongo apiculato scapo pluries breviore, spica elongata, bracteis coriaceis acutis recurvis ovario longioribus, sepalis apice subulatis, petalis ovatis ciliatis, labello panduriformi piloso basi auriculato apice rotundato integerrimo barbato, columnae dentibus filiformibus digitis subulatis.

Bolbophyllum meridense Rchb. fil., in Linnaea, XXII., p. 835.

Wild in Venezuela; in the province of Truxillo, near Timotes and Chachopo, at the height of 6000 to 8000 feet — Funk and Schlim, n. 735; in Merida, at the height of 4000 feet — Rchb. fil. (v. s. sp. comm. sel. Linden). — I have to thank Mr. Linden for a specimen of this singular species, remarkable for its great bearded lip. The flowers are said to be reddish, bordered with violet.

Obs. Didactyle? Claussenì ex omni analogia juxta Bolbophyllum coccinum pertinet.

27. BOLBOPHYLLUM GLADIATUM Lindl. Huc: Lindl. Folia I. 1. Oct. 1852: *Didactyle gladiata* (false quidem allato *B. chloroptero* !):

D. pseudobulbo ovato tetragono, folio oblongo carinato spica longe pedunculata multo breviori, spica secunda multiflora, rachi subclavata, sepalis linearibus lateralibus connatis, petalis obovatis ciliatis limbatis, labello unguiculato cordato in processum angustum gladiatum villosum elongato, columnae digitis e medio brevibus.

Bolbophyllum gladiatum Lindley, in Ann. Nat. Hist., vol. X. p. 185. — *Bolbophyllum chloropterum* Rchb. fil., in Linnaea, XXII. p. 835.

Wild in Brazil — Descourtilz; near Rio Janeiro — Reichenbach. (v. ic. pict. in bibl. De Lessert.). — A most singular plant, the appearance of whose flowers is thus described by M. Descourtilz: — „The upper sepal is very long, very narrow, channeled at its base, acute at the point, lemon-coloured, as well as the two lateral, which are joined by their edges into one, two-toothed at the point. From the position constantly assumed by the flower these three sepals are placed right and left of the axis. The petals are short, spathulate, touching at both base and point, leaving between them a heart-shaped space; they are white edged with purple, and fringed with purple hairs on their outer edge; in the middle is a large heart-shaped violet spot. The lip is hinged with the column, moveable, and consists of a channel with broad wings, white edged with purple, and of a very long process, shaped like a sword-blade hanging down, brownish and velvety with hairs."

28. BOLBOPHYLLUM WEDDELII Rchb. fil. Huc Lindl. l. c.: *Didactyle Weddelii.*

D. pseudobulbo pyramidali brevi obtuso, folio oblongo plano coriaceo spica longe pedunculata 8—10-flora multo breviori, rachi subclavata, sepalis linearibus obtusis liberis, petalis...., labello unguiculato subcordato in processum angustum ensiformi-spathulatum (laevem?) elongato, columnae cirrhis erectis digitis e medio nanis.

Wild in Brazil; Minas Gerães — Weddel, ic. n. 12. (v. ic. pict. in bibl. herb. mus. Paris.). — At first sight much like D. gladiata; but the leaves are broader, the spike not secund, the sepals all disjoined, and the lip broader; the rachis also seems much more clavate. It appears from Mr. Weddell's sketch that the leaf is about three inches long, the scape about eighteen inches, and the spike rather less than four inches. The sepals are olive-green spotted with brown; the lip white with a purple base, and numerous oblong spots of the same colour.

29. BOLBOPHYLLUM TRIPETALUM Lindl. Huc Lindl. l. c.: *Didactyle tripetala.*

D. pseudobulbo tetragono, folio oblongo acuto racemo breviore, scapo 4—7-floro flexuoso erecto, bracteis ovatis scariosis ovario longioribus, *sepalis linearibus* acutis patulis, petalis minimis squamaeformibus, labello

ciliato unguiculato apice oblongo obtuso basi ima utrinque auriculato, columnae digitis dentiformibus.

Bolbophyllum tripetalum Lindley, in Ann. Nat. Hist., vol. X. p. 185.

Wild in Brazil; in the province of St. Paul's — Descourtilz, (v. ic. pict. in bibl. De Lessert.). — A good figure of this exists among M. Descourtilz's drawings, in the library of Monsieur De Lessert. Like Bolbophyllum saltatorium, its lip appears to be delicately and elastically articulated with column. The sepals are pale yellow, three-quarters of an inch long. The lip is bright yellow with crimson spots. It is stated by its discoverer to be scentless and to cover whole trunks of trees.

β. Columna utrinque unidentata seu submutica.

1. 1. Labellum oblongum.

† Labellum plumosum seu papillis filiformibus hirsutum.

30. BOLBOPHYLLUM CALAMARIUM Lindl. — Bot. Reg. XXIX. 1843. Misc. 109.

Pseudobulbis tetragonis, folio oblongo plano coriaceo obtuso basi canaliculato, scapo stricto longissimo apice florido, bracteis membranaceis emarcidis ovarii longitudine, sepalis anguste triangularibus margine pubescentibus, petalis cornuformibus subteretibus glabris, labello sessili mobili lineari basi sulcato margine omni tomentoso supra medium villis longissimis crinito, columnae cornubus falcatis.

Allied to Bulb. saltatorium, like that species having a moveable lip fringed with long purple hairs, which raises and falls spontaneously as the stem sways about the wind. Its scape is full 2′ long, stiff and erect. Flowers are dirty yellow ochreocolour with a little purple upon them; lip dull purple. — Sierra Leone Col. Fielding.

31. BOLBOPHYLLUM TREMULUM R. Wight. Ic. V. I. 1851. 1749: pseudobulbs ovate, somewhat corrugated, leaf ovate, lanceolate acute; scape straight, bracts small, ovate, acute: sepals ovate lanceolate, acute, pubescent: petals rhombeo-ovate small, densely ciliate: lip articulated with the prolonged base of the column, linear, obtuse the back toward the apex, covered with long tremulous hairs. Flowers yellow, passing into purple towards the margins of the sepals; lip purple. Wynand on trees. Jerdon and Major Cotton. — Allied to Bolbophyllum Calamaria. — *Fig.* by Mrs. Jerdon. Hairs of lig jointed at the base.

32. BOLBOPHYLLUM SALTATORIUM Lindl. — Bot. Reg. XXIII. 1837. 970.

Pseudobulbis ovatis compressis ancipitibus, foliis solitariis acutis, racemis brevibus, bracteis ovatis membranaceis appressis emarcidis ovario subaequalibus, sepalis ovato-oblongis pubescentibus subaequalibus, tepalis subulatis columna longioribus, labello ovato acuminato sepalis longiore villoso apice stuposo.

Perigonium viridi brunneum, labellum postice viride antice brunneo rubrum.

33. BOLBOPHYLLUM BARBIGERUM Lindl. — Bot. Reg. XXIII. 1837. 1942.

Pseudobulbis lenticularibus, foliis solitariis racemo erecto brevioribus, bracteis ovatis amplexicaulibus ovario subaequalibus, sepalis lineari-lanceolatis acuminatis, petalis subulatis columna brevioribus, labello lineari lanceolato acuminato villoso apice stuposo-barbato.

Sierra Leone. Loddiges. — Perigonium virens kermesinumque. Labellum flavum, barba kermesina.

†† Labellum eplumosum.

34. BOLBOPHYLLUM EUBLEPHARUM Rchb. fil. MSS.:

Pseudobulbo-subtereti (?) elongato monophyllo, folio oblongo-lanceolato acuto, pedunculo gracili apice nutante (? in vivo?) folium ter supe-

rante, distanter vaginato, apice racemoso per quintam longitudinis partem, bracteis lineari-lanceis ovaria pedicellata subaequantibus, sepalis ovatis acutis integerrimis, tepalis ovatis obtuse acutis limbo serrulato-fimbriatis, labello oblongo obtuse acutiusculo complicato (?) basi rotundato, columna apice utrinque erecto aristata, dentibus utrinque duobus suppositis altero sub altero.

Flores illis Bolbophylli Carayani aequales; verosimiliter sepala maculata. Pseudobulbus duos pollices altus, folium quinque pollices longum. Pedunculus ultra pedalis.

Darjeeling. Griffith (Herb. Lindl.).

35. BOLBOPHYLLUM LONGIPES Rchb. fil. MSS.:

Rhizomate squamoso valido, pseudobulbis distantibus obturbinatis monophyllis, folio oblongo-lanceolato, pedunculo folium bis superante gracili erecto basi paucivaginato, per duas tertias laxe racemoso, ovariis pedicellatis bracteas multoties superantibus, sepalis ligulatis obtuse acutis, inferioribus aliquid longioribus, tepalis triangulo-ligulatis, brevioribus, labello ligulato basi rotundato, apice obtusato velutino piloso, columna apice utrinque acuta.

Pseudobulbus pollicem longus. Folium quinque pollices longum. Pedunculus undecim pollices altus. Ovaria pedicellata sesquipollicaria.

Moulmein. Lobb. 4 — 5000 ' (Herb. Lindl.).

36. BOLBOPHYLLUM MICROTEPALUM Rchb. fil. MSS.:

Pseudobulbo obturbinato, folio oblongo obtuse acuto basi angustato, pedunculo breviore basi dense vaginato, medio ac sursum univaginato, spica densissima cylindracea, sepalo summo triangulo acuminato, sepalis lateralibus triangulis acuminatis obtuse acutis, tepalis ovato-triangulis sexies usque septies brevioribus, labello triangulo obtuse acuto, basi rotundato, pilosulo columnae aristis antrorsus.

Pseudobulbus ultra pollicaris. Folium prope quinque pollices longum. Pedunculus quatuor pollices longus.

Moulmein. Lobb. (Herb. Lindley).

37. BOLBOPHYLLUM TRISTE Rchb. fil. MSS.:

Pseudobulbo subsphaerico, folio ..... (foliis?) ...., pedunculo tenui distanter paucivaginato, spica densa nutante, ovariis brevibus, sepalis oblongo triangulis, lateralibus subcarinatis, tepalis oblongo triangulis dimidiam longitudinem aequantibus, labello oblongo obtuse acuto ante basin refracto, basi rotundato.

Flores ex minoribus.

Khasiya. Lobb. (Herb. Lindley).

38. BOLBOPHYLLUM CARINIFLORUM Rchb. fil. MSS.:

Pseudobulbo obturbinato diphyllo, foliis oblongis acutis, basi cuneatis, pedunculo folia superante apice subtransverso dense spicato, vaginis in basi nonnullis distantibus, sepalo summo triangulo apiculato, sepalis lateralibus carinatis, subconnatis, tepalis duplo brevioribus triangulis argute acutis, labello oblongo ligulato basi rotundato curvato.

Khasiya Hills. Lobb. (Herb. Lindl.).

39. BOLBOPHYLLUM CONCHIFERUM Rchb. fil. MSS.:

Pseudobulbo oblongo, folio oblongo ligulato obtuse acuto, pedunculo erecto distanter vaginato, spica cylindracea erecta, sepalo summo triangulo obtuso, sepalis lateralibus ovatis coalitis apice bitriangulis, tepalis linearibus acutis, labello basi replicato oblongo acuto uti sepala intus tuberculato.

Khasiya Hills. Lobb. (Herb. Lindl.).

40. BOLBOPHYLLUM SCEPTRUM Rchb. fil. MSS.:

Pseudobulbo?, folio longe petiolato cuneato oblongo ligulato acuto, ultra bipedali, pedunculo densius vaginato, vaginis ancipitibus, inflorescentia cylindracea, bracteis oblongis ovaria superantibus, sepalis oblongo-ligulatis, lateralibus subfalcatis, tepalis linearifalcatis, labello trilobo, lobis lateralibus obtusangulis, lobo medio triangulo-ligulato, columna apice trifida.

Folium magnum, ultra bipedale. Petiolus quinquepollicaris trigonus. Lamina subbipedalis apice oblique acuminata, sed brevius. Nervus medius dorso carinatus. Pedunculus ultra bipedalis. Vaginae ancipites in basi congestae, ceterum usque sub inflorescentiam sparsae: quatuor aggregatae, quatuor distantes; summa sub inflorescentia. Flores ex majoribus, illis Maxillariae pallidiflorae subaequales.

Tepalum dorsale ligulatum acutum supra dorsum subcarinatum. Sepala lateralia falcata acuto margine undulata (saltem in sicco) curvato deflexa. Tepala falcata linearia basi latiora apice paulo dilatata, quasi attenuata, sepalis paulo breviora. Labellum sepalis multo brevius, ab ovata basi lineare obtusatum hinc trilobulum, apice marginibus revolutis convexum obcucullatum, ante basin infractum, carinae geminae majores lineam elevatam mediam obcelantes per medium in aream incrassatam communem exeuntes. Gynostemium apice trifidum: dens posticus uncinatus brevis utrinque denticulo minuto auctus, dentes laterales longiores, ascendentes utrinque denticulo minori aucti. — Insul. Sondaic. — (Adest in hb. Lindl.)

41. BOLBOPHYLLUM HERMINIOSTACHYS Rchb. fil. MSS. Huc: *Taurostalix* Rchb. fil. in v. Mohl et v. Schldl. Bot. Z. 1852. p. 933.

Perigonii membranaceo-carnosi phylla externa lanceolata acuminata, lateralia externa curvula, ima basi coalita, omnia elongata, l. i. abbreviata, ligulata, apice triangula, basi utrinque obtusangula, labellum unguiculatum, trilobum, lobi laterales trianguli, postice rotundati antice sensim in lobum medium ligulatum microscopice denticulatum transeuntes, callulis 3—5 in ima basi labelli, carina gemina carnosa, basi extrorsa, dein parallela, apice confluente, lobi laterales erecti, margines lobi medii revoluti; gynostemium humillimum, androclinium tridentatum, dente postico minuto, anticis dentibus elongatis, teretiusculo-subulatis, erectis, gynostemio ipso longioribus, in basi antica interna minus denticulatis, dein decurrentibus in membranam anticam basi confluentem, gynostemii frontem cum stigmate rotundo obvelantem, rimam interstitii lineam basi acutam linquentem; rostellum obtusum; anthera depressa, rotunda, dorso carinata, pollinia duo, depresso-globosa, arctissime connata, lobulo elliptico divisibili in margine interno superiori utrinque.

Taurostalix Herminiostachis. Eine schlanke, vielblüthige, ziemlich dichte, fünf Zoll lange Aehre. Blüthen so gross, wie bei Herminium Monorchis. Deckblätter lanzettlich, spitz, so lang als Fruchtknoten. Blüthenhülle purpurfarbig. — Blatt länglich, spitz, unten keilförmig, — Aus der Sierra Leone.

42. BOLBOPHYLLUM RECURVUM Lindl. p. 53. n. 20. — Bot. Reg. XXX. 1844. Misc. 70. Mss. Loddiges received it from Guiana 1839, the specimens that have just flowered having proved to be identical in all respects with the African plant.

43. BOLBOPHYLLUM SETIGERUM Lindl. — Bot. Reg. XXIV. 1088. Misc. 24.

Pseudobulbis ovatis monophyllis, foliis ovalibus acutis scapo erecto radicali spicaque pendula multo brevioribus, rachi filiformi, sepalis ovatis acutis erectis, petalis setaceis patentissimis basi extus tuberculatis, labello oblongo recurvo medio incrassato et elevato apice tridentato, columna bicorni, anthera pedicellata.

Obt. by Mers. Loddiges from Demerara. Flowers small, dull purple, upon a light green ground. One very remarkable circumstance in its structure is the presence

of a minute tubercule at the base of the petals on the outside, which in an other species, B. bracteolatum, from the same country, is in the form of a distinct scale.

Obs. Cf. Bolbophyllariae genus. Flores nullos teneo.

44. BOLBOPHYLLUM QUADRISETUM Lindl. n. sp. — Hook. Lond. Journ. 1843. p. 70.

Folio oblongo-lanceolato basi angustato, spica pedunculata rectiuscula, pedunculo 2—3 vaginato aequali, rachi tenui, bracteis ovatis floribus subaequalibus, sepalis acutissimis, petalis linearibus acuminatis serrulatis, labello oblongo marginato bilamellato, columna biseta.

Flores coriacei resupinati. Petala et columnae setae subsimilia. Antherae callo cristatae. — British Guiana Schomburgk.

45. BOLBOPHYLLUM HIRTUM LO. 51. — Bot. Reg. 42. adn. ad 66.:

Pseudobulbo elongato ovato, foliis lato ligulatis obtusis scapo glabro brevioribus, spica caudiformi multiflora cernua pubescente, sepalis acuminatis hirsutis et glandulosis, petalis nanis acutissimis fimbriatis, labello oblongo-lineari emarginato obtuso supra hirsuto, anthera glandulosa.

46. BOLBOPHYLLUM COCOINUM Bat. — Bot. Reg. XXIII. 1837. Tab. 1964.

Pseudobulbis ovatis tetragonis, foliis solitariis lanceolatis, spica stricta multiflora brevioribus, bracteis membranaceis linearibus acutis ovario longioribus, sepalis aristatis, pètalis linearibus denticulatis, columna bicorni longioribus, labello ovato-lanceolato obtuso basi ciliato, sub apice foveato.

Sierra Leone imp. ex Loddiges. Filling the house with the scent of a cocoa-nut. Flores rosei.

47. BOLBOPHYLLUM ADENOPETALUM Lindl. — Bot. Reg. XXVIII. 1842. Misc. 95.

Foliis oblongis obtusis petiolatis basi vix bulbosis, spica secunda basi laxe vaginata multiflora folio sublongiore, sepalis acuminatis, petalis spathulatis acutis intus glandulosis, labello ovato angusto obtuso acuminato ciliato basi canaliculato.

Sincapore, rec. Loddiges. The flowers are yellowish and slightly sweetscented. Resembles B. cocoinum from which its want of a pseudobulb at most its extremely small one and its petals not serrated but glandular inside readily distinguish it. One of the plants included by Dr. Blume under his Diphyes flavescens?

48. BOLBOPHYLLUM LIMBATUM Lindl. — Bot. Reg. XXVI. 1840. Misc. 171.

Pseudobulbis ampullaceis depressis, foliis....., racemo cylindraceo multifloro longe pedunculato, squamis pedunculi sursum nudi duabus distantibus parvis vaginantibus, bracteis minimis, sepalis ovalis obtusis ciliatis, petalis multo brevioribus obovatis margine superiore villoso, labello ovato crasso obtuso petalis longiore basi bidentato: disco laevi nitido limbo scabritie minuta opacato.

The flowers of this plant are deep dull purple, in a rather loose raceme. The sepals and petals are both fringed with whitish hairs. The label is remarkable for being polished in the middle, and surrounded by a broad belt of minute points, which give it an opaque shagreen appearance. Like most of the genus it is a plant of little beauty. Sincapore imp. Loddiges.

49. BOLBOPHYLLUM LASIANTHUM Lindl. — Gardn. Chronicle 1855. 53: — Alias *Anisopetalum lasianthum* De Vriese ic. 249. ined.

B. (bulbosum, repens, spiciforme, sarcanthum), foliis latis oblongis coriaceis *scapo* valido laxe vaginato aequalibus, racemo pubescente, floribus *carnosis*, sepalis oblongo-lanceolatis acuminatis lateralibus longioribus *setis piliformibus* carnosis vestitis, petalis linearibus setaceo-acu-

minatis multo brevioribus, labello linguiformi anguste marginato basi crassissimo crista ovali foveata, columnae angulis angustissimis integris.

Drawing from Sumatra, in De Vriese's hands. — Manilla imp. Loddiges. — Leaves 7 inches by 2; the scape somewhat taller, and the flowers nearly 2 inches long. The latter are dull purple and copiously covered with long fleshy hairpointed bristles. — Belongs to the group of B. Careyanum, quadrisetum, setigerum, Khasyanum, nilgherrense, imbricatum. — Huc: De Vriese Illustr. tab. XIII.

2. 2. Labellum tridentatum.

50. BOLBOPHYLLUM FUSCOPURPUREUM R. Wight Ic. V. 1651.

Rhizoma creaping, pseudobulbs ovate, angular, congested; leaves broadly elliptic, contracted at both ends, emarginate, raceme much longer than the leaves, 4—6 flowered, drooping towards the apex: flowers longish pedicelled; lateral sepals about twice as large as the ovate lanceolate posterior one: petals ovate at the base prolonged into a long filiform acumen, terminating in a little fleshy nob: lip 3 lobed, lateral lobes short obovate or subspathulate; middle one fleshy, nearly equaling the sepals, subspathulate or tongue shaped, entire, hispid. Flowers dark reddish brown, lip brownish purple.

Neilgherries on trees and rocks along the bank of the Kartairy river below Kaitri, and also below Neddawuttim on the N. western slopes, where Mr. Jerdon detected it. The petals of this species are very unusual, and the middle lobes of the lip in the fresh plant gives so much the idea of a tongue, that the „Tongue Orchis" is the name by which it is known to Mrs. Jerdon.

51. BOLBOPYLLUM NEILGHERRENSE R. Wight Ic. V. I. 1851. 1680.

Rhizoma creeping, pseudobulbs ovate, irregularly angled somewhat corrugated; laeves oblong, elliptic, obtuse, emarginate; spikes cylindrical, shorter than the leaves: flowers numerous congested: bracts lanceolate, acute: lateral sepals much larger than the posterior, oblique: posterior broad, ovate, subacute: petals small, broad at the base, ovate acuminate, subdenticulate: lip three lobed, lateral ones spreading, triangular, acute, much smaller than the broad ovate obtuse somewhat tongue shaped, hispid middle one. Flowers dull yellowish green.

Neilgherries and Malabar. — Lip too acute in the representation. — Sepals dull brownish yellow, lip dirty brownishgreen, sprinkled with short hair. — Near B. Careyanum.

52. BOLBOPHYLLUM FUSCUM Lindl. — B. Reg. XXV. 1839. Misc. 5.

Pseudobulbis oblongis obtuse tetragonis diphyllis, foliis lineari oblongis patentibus emarginatis, spica pedunculata disticha ancipiti glabra pendula, bracteis ovatis cucullatis acutis coloratis distantibus florum longitudine, sepalis triangularibus, labello trilobo carnoso lacinia intermedia convexa rotundata lateralibus brevioribus magis membranaceis acutis serrulatis.

Nearly related to B. tetragonum. Sierra Leone. Flowers deep dull chocolate colour. Like Liparis pendula they are studed with large transparent cells, containing raphides in cubical parcels, and they are more over filled with short spiral vessels, so closely filled with air, that it is difficult to drive it out even with the aid of the air pump. Loddiges importavit.

53. BOLBOPHYLLUM CAREYANUM Sprg. — Bot. Mag. III. Ser. I. Vol. 1845. 4166.

Rhizomate repente, pseudobulbis oblongo-ovatis laevibus membranaceo-vaginatis, folio solitario oblongo lanceolato obtuso basi angustiore, racemo pseudobulbi longitudine, pedunculo perbrevi squamoso, flori-

bus imbricatis, sepalis ovatis acuminatis lateralibus duplo majoribus conniventibus, petalis minimis acuminatis, labello ovato longe unguiculato utrinque unidentato, columna bicornuta.

Anisop. C. Hook. Ex Fl. 149. *B. Careyanum* Spr. Syst. Veg. III. p. 732. Wall. Cat. 1990. LO. 51 Nepal, Martaban. Wallich. — Griffith. Flores flavi sanguineo maculati, labelli ungue (s. pede columnae) purpureo.

54. BOLBOPHYLLUM CUPREUM Lindl. — Bot. Reg. XXIV. 1838. Misc. 183.

Folio angusto solitario scapo longiore, racemo brevi oblongo nutante, petalis setaceo-acuminatis serrulatis, labello ovato dente utrinque setaceo, columnae angulis aristatis.

A native of Manilla, whence Mrs. Loddiges received it from Mr. Cuming. The flowers are copper-coloured, and have a smell extremely like that of Valeriana root.

55. BOLBOPHYLLUM FLAVIDUM Lindl. — Bot. Reg. XXIV. 1840. Misc. 195.

Pseudobulbis oblongis compressis vaginis 2 membranaceis vestitis, folio basi angustato spicis laxis longiore, sepalis acuminatis, petalis oblongis obcordatis acutis, labello bicarinato recurvo: lobis lateralibus undulatis obsoletis, columna bicorni.

Pale yellow-flowers. Sierra Leone imp. Loddiges. It has flowers in size and form like those of B. cocoinum, but they are arranged in a lax spike.

55b. BOLBOPHYLLUM TRIADENIUM Rchb. fil. MSS. Huc: *Sarcopodium triadenium* Lindl. Fol. n. 4.

S. pseudobulbis parvis ovatis diphyllis, foliis lineari-oblongis retusis basi canaliculatis, pedunculis apice racemosis trifloris folio brevioribus, squama unica in medio, sepalis lineari-lanceolatis acuminatis patentibus, petalis linearibus acutissimis aequilongis, labello trilobo lobis lateralibus oblongis intermedio ovato acuto basi tricalloso.

Wild in Java — Junghuhn, 301, (v. s. sp. comm. cel. de Vriese). — I have not seen the anther and pollen-masses of this. The dried flowers are cartilaginous.

55c. BOLBOPHYLLUM STRIATUM Rchb. fil. MSS. Huc: *Sarcopodium striatum* Lindl. Folia n. 12.

S. pseudobulbis subglobosis monophyllis, foliis oblongis planis emarginatis petiolo lineari subaequalibus, racemis paucifloris debilibus prostratis laxe bracteatis, sepalis ovatis subaequalibus, petalis linearibus patentissimis obtusis duplo brevioribus, labello lanceolato integerrimo basi utrinque obsolete dentato.

Dendrobium striatum Griffith Notulae, p. 318.

Wild in Khasia; at an elevation of 4—5000 feet — Hooker and Thomson; at Myrung on trees, Mumbree $\frac{146}{268}$, — Griffith. (v. s. sp.). — The flat long-stalked leaves, and two-to-three-flowered weak prostrate racemes are remarkable. Flowers the smallest of the genus, greenish, lined and dotted with sanguine. Lip greenish white, with three straight central sanguine lines and crimson lateral veins. — Griffith. Pseudobulbs dark brown, smooth. Lines on flower dingy purple. — Hooker and Thomson.

II. Rhachis foliiformis. (*Megaclinium* Lindl.)

56. BOLBOPHYLLUM COLUBRINUM Rchb. fil. MSS. Huc: *Megaclinium colubrinum* Rchb. fil. in Bonpl. III. 223.: aff. M. Bufoni, sepalis laevissimis, glaberrimis cuspidatis, tepalis falcatis acutis tertia brevioribus, labelli lamina ligulata lateribus mediis subtriloba carnosissima. Rhizoma validum lignosum vaginis emarcidis tectum. Pseudobulbi obtusissime trigoni, faciebus ovalibus. Folium cuneato oblongum apice subemarginatum carnosum quatuor pollices longum, plus unum latum. Pedunculus

spithamêeus nigro violaceus guttulis plurimis albis aspersus (unde nomen) medium usque teres, septemvaginatus, apice anceps, marginibus flexuosis. Bracteae ligulatae deflexae emarcidae. Flores nigroviolacei vernixii illis Megaclinii falcati majores. Sepala intus flavidoviridia. Labellum flavum nigroviolaceo guttulatum. Gynostemium canaliculatum alatum utrinque pone apicem obtusangulum, androclinium obtuse tridentatum; flavum nigroviolacao guttulatum. Fovea more generis ligulata. — Cultur der Herren Booth und Söhne zu Flottbeck.

57. BOLBOPHYLLUM OXYPTERUM Rchb. fil. MSS. Huc: *Megaclinium oxypterum* Lindl. Bot. Reg.

Pseudobulbis monophyllis acutissime tetra-pentagonis oblongis, folio oblongo coriaceo caulis sine rachi longitudine, rachi ensiformi arcuata crispata apice tetragona pyramidali, bracteis reflexis, sepalis lateralibus ovatis intermedio lineari acuminatissimo, petalis nanis linearibus falcatis, labello crasso linguiformi apice recurvo margine pone basin fimbriato.

A fine species. Sierra Leone. Loddiges. Nearly related to M. maximum.

58. BOLBOPHYLLUM VELUTINUM. Huc: *Megaclinium velutinum* Lindl. — Bot. Reg. 1847. t. 32. adn.

Pseudobulbis ovatis trigonis (3—4 gonis?), foliis oblongo-lanceolatis emarginatis, rhachi lineari-oblonga crenata, sepalis pilosis, supremo recurvo obtuso calloso marginato lateralibus refractis ovatis acutis, intus velutinis; petalis linearibus acuminatis; labello ovato transverse corrugato obtuso; columna utrinque dente obtuso aucta.

In Cape Coast Castle. Differs from M. falcatum by its lateral sepals velvety inside. Flowers deep purple as well as the rhachis, except the upper sepals and petals, which are dull yellow.

59. BOLBOPHYLLUM FALCATUM. Huc: *Megaclinium falcatum* Lindl. B. R. 989. — Huc — Morren: Ann. sc. nat. XIX. p. 91. 1843.

Le Labellum a un mouvement

a. mecanique: lorsque on l'a touché.

b. spontané: par les cellules diachymateuses du dessous du filet, qui s'allongent pour relever le labellum, en même temps que celles du dessus se raccourcissent et vice versa, dans le mouvement où le labelle d'abcide. C'est le double mouvement du liquide intracellulaire lui-même, destiné a entrer dans une cellule pour le nourrir et pour en sortir ensuite? Le liquide sort de la fleur pour entrer dans la labelle, et sort ensuite du labelle pour entrer dans la fleur: ce mouvement est ici rendu sensible aux yeux par l'extrême élasticité de l'organe où s'opère ce double transport? Cela n'est pas improbable et dans ce cas l'abaissement du labellum s'accorderait avec un afflux de liquide nutritif, et son élévation avec un reflux de ce même liquide. — Le labelle flétrit en 2 jours en suite de son action vitale, le reste de la fleur reste en bon état 8 jours!

60. BOLBOPHYLLUM BUFO. Huc: *Megaclinium Bufo* Lindl. — Bot. Reg. XXVII. 1841. Misc. 82.

Rachi maxima lanceolata, floribus nigro-pilosis, sepalis acutissimis supremo laevi lateralibus intus pubescentibus, petalis minimis acutis glabris, labello ovato carnoso rugoso.

Let the reader imagine a green snake to be pressed flat like a dried flower, and then to have a row of toads, or some such spreckled reptiles, drawn up along the middle in single files their backs set up, their fore legs sprawling right and left and their mouths wide open, with a large purple tongue wagging about convulsively; and a pretty considerable approach will be gained to an idea of this strange plant, which if Pythagoras had but known of it, would have rendered all arguments about

the transmigration of souls superfluous. It is a native of Sierre Leone, whence Lodd. received it. The figure will be published in some future number of the Gardener's Chronicle.

61. BOLBOPHYLLUM MAXIMUM. Huc: *Megaclinium maximum* Lindl. — Bot. Reg. 1909. LO. 47. — B. Mag. 4028/43.

Sepalo supremo acuto lateralibus margine involutis acuminatissimis reflexis, labello lineari revoluto.

Facies M. falcati, sed paulo robustius, et folia minus emarginata et margine subrevoluta. Rhachis ensiformi falcata, dentata, multiflora, 9 pollices longa, pallide viridis. Flores herbacei. Pedicelli et calyx extus sanguineo maculati. Sepalum supremum erectum oblongum, acutum, denticulatum utrinque callosum, lateralibus duplo longius; lateralia triangularia, e lata basi acuminatissima, reflexa, marginibus involutis, petala parva, plana, linearia acuta, pallide viridia. Columna lata, discoidea, tenuis, marginata, basi cum labello lineari fusco revoluto mobilis elastice articulata. Anthera unilocularis. Pollinia solida, geminata, nec lobata, nec linea exarata.

Bot. Mag. 4048. 1843: We are informed by M. Lindley that the present kind was first collected by Smeathman in Sierra Leone. It was afterwards sent to M. Loddiges, trough whose means living specimens were sent. The plant is now known in our collection. — Floret Jun. Jul. — Perigonium flavum purpureo pictum.

UMBELLATA.

Sect. *CIRRHOPETALUM:* sepala lateralia longe extensa. Inflorescentia seu umbelliformis seu subracemosa.

* Lindl. B. Reg. XXIX 1843 Oct.: *Cirrhopetalum* is a name proposed in the year 1824 for the Bulbophyllum longiflorum of Du Petit Thouars, a Mauritius plant, remarkable for the great length of its lower sepals. 1825 Professor Reinwardt gave the same or some nearly allied species the name of *Zygoglossum*, but of course Cirrhopetalum took precedence on acount of its primity of date. — In 1830 one knew 6 species; now 21 species (14 living, 2 dryed and 5 upon credit of others).

a. *Tepala ciliata.*

aa. Sepalum dorsale laeve.

62. BOLBOPHYLLUM WALLICHII. Huc: *Cirrhopetalum Wallichii* 1843 sub 49. — L. n. 5. Bot. Reg. 1839 misc. 119. et l. c.

Foliis lanceolatis apice fissis scapi erecti longitudine, racemo multifloro pendulo, bracteis linearibus, sepalis glaberrimis supremo acuminato lateralibus linearibus ligulatis vix acutis, petalis acuminatis subciliatis, labello .....

Nepal. — Bot. Reg. XXV. 1839. Misc. 118. — The charact. of C. Wallichii in LO. is erroneous in consequence of bad specimens and an Indian drawing having been misunderstood, it is necessary to correct the details.

63. BOLBOPHYLLUM REFRACTUM. *Cirrhopetalum refractum* Zoll. flora 1847 p. 457. Cf. Walp. Ann. I. 776.

64. BOLBOPHYLLUM SCABRATUM. Huc: *Cirrhopetalum caespitosum* Wall. MSS. B. Reg. XXIV. 1838. Misc. 58.

Pseudobulbis ovatis monophyllis, foliis anguste ovalibus obtusis basi angustatis scapo longioribus, scapo filiformi erecto vaginis paucis membranaceis carinatis acutis distantibus laxe vestito apice umbellato, sepalo supremo obovato fornicato acuto margine scabro, lateralibus acuminatis convolutis triplo longioribus, petalis ovatis apiculatis, pectinato serratis, labello minimo solido triquetro apice recurvo angulis superioribus marginatis.

A little epiph. from East Indies imp. by the Duke of Devonshire now preserved at Chatsworth. It has small, pale yellow-ochre coloured flowers, without any thing striking about them. April.

65. BOLBOPHYLLUM NUTANS. Huc: *Cirrhopetalum nutans* Lindl. in Bot. Reg. 1839., misc. 118.

Pseudobulbis ovato-subrotundis rugosis, foliis ovato-subrotundis emarginatis coriaceis humi pronis, scapo erecto elongato, umbella multiflora nutante, bracteis linearibus acuminatis, sepalis glaberrimis: supremo acuminato lateralibus linearibus ligulatis vix acutis, petalis ovatis acutis serrulatis, labello obtuso convexo bicristato, columnae angulis obsolete bidentatis.

Manilla. — This has a nodding umbel of pale straw-coloured flowers, at the end of a weak scape about 6" high. The leaves are from 1½" to 2" long, very thick, emarginate, and lying almost flat upon the ground. The species is near C. Wallichii. — Manilla. Cuming. Loddiges. — B. Mag. 44. 18.

65 b. BOLBOPHYLLUM CHINENSE. Huc: *C. chinense* Lindl. B. R. 1842. XXVIII. misc. 29.

Foliis lanceolatis, umbella multiflora, sepalo supremo galeato petalisque oblongis brevioribus obtusis serrulatis apiculatis: lateralibus lanceolatis, labello linguiformi obtuso carnoso convexo laevi tremulo.

China. — Flowers rather large, pale fawn colour, with dorsal helmet-shaped sepals and petals spotted with crimson. — Labellum viride petalis violaceis, sepalis flavis, supremo apice purpureo.

66. BULBOPHYLLUM LONGIFLORUM Thouars Orch. Tab. 98.: Huc: Lindl. B. Reg. 1843. sub 49.: *Cirrhopetalum Thouarsii*. L. n. 1. Bot. Reg. 1838. t. 11.

Epidendrum umbellatum Forst.
Bulbophyllum longiflorum Thouars.
Zygoglossum umbellatum Reinw.
Cymbidium umbellatum Spreng.

Pseudobulbis 4-gonis, folio oblongo petiolato, umbella subdimidiata, sepalo dorsali setaceo-acuminato lateralibus oblongo-linearibus, petalis ovatis serratis setaceo-acuminatis, labello ovato retuso, columnae auribus bidentatis.

Otaheite, Java, Mauritius, Madagascar. — Flowers pale cinnamon colour, with a little purple dotting about the sepals and petals. — Society Island Mathews! Java Reinwardt. Isle de France, Manilla Cumming. — Perigonium ochraceum, sepala brunneo maculata, labellum violaceo pictum. — B. Mgz. 4237.

bb. Sepalum dorsale fimbriatum.

67. BOLBOPHYLLUM FIMBRIATUM. Huc: *Cirrhopetalum fimbriatum* Lindl. Bot. Reg. 1839. Misc. 120.

Pseudobulbis ovatis subtetragonis, foliis ovalibus...., scapo erecto bracteis linearibus acuminatis, umbella multiflora, sepalis lateralibus ligulatis vix acutis cohaerentibus, supremo petalisque ovatis acuminatis fimbriatis, labello crasso linguiformi nudo obtuso, columnae angulis cornutis edentulis, anthera papillosa.

Bombay. — A very pretty species, with the long lower green sepals united into a channelled rather stiff strap, while the upper sepal and the petals are broken up at the margin into beautiful purple fringes. — Bombay, imp. Lodd. — Pollen masses in both this ad nutans 4 collateral, and adhering together, with the interior pair much smaller, than the two outers. — Bot. Mag. 4391.

Huc: Cirrhopetalum fimbriatum R. Wight Ic. V. 1851. tab. 1655.: leafless? pseudobulbs caespitose, irregularly angular depressed: scales slender, erect, furnished with remote appressed scales: umbels many flowered, orbicular. lateral sepals long

linear, cohering to near the point; posterior ovate acuminate, and, with the conformable but smaller petals, fimbriate on the margin: lip ovate, obtuse, fleshy, shorter than the petals. Lateral sepals often cohering, cream coloured with darker lines, petals, lip and posterior sepal red. — Coorg Jungles. Jerdon. Jan. „Umbrella Orchis" Mrs. Jerdon.

68. BOLBOPHYLLUM CORNUTUM. Huc: *Cirrhopetalum cornutum* Lindl. — Bot. Reg. XXIV. 1838. Misc. 138.

Pseudobulbis ovatis angulatis scapo paulo brevioribus, sepalis lateralibus in cornu connatis superiore petalisque ovatis ciliatis, labello angusto triangulari supra sulcato subtus carinato.

The leaves are 6—8" long, and the flowers dull purple. It was found by Mr. Gibson at Nungclow, on the Khoseea hills, growing upon rocks and flowered at Chatsworth in August last.

Huc: B. Mag. 4752?.: *Cirrhopetalum cornutum* Lindl.

Pseudobulbis oblongo-ovatis laevibus vaginatis, foliis solitariis oblongo ligulatis in petiolis attenuatis, scapis radicalibus vaginatis gracilibus folio brevioribus, fl. terminalibus eleganter radiatim umbellatis, sepalo superiore ovato concavo ciliato, sep. lat. maximis linearibus elongatis in cornu connatis purpureo sanguineis, petalis parvis ovatis concavis ciliatis, labello ovato acuminato carnoso recurvo, columna bicuspidata.

Cirrh. c. Lindl. B. Mag. 1838. Misc. 138. 1843. sub t. 49. n. 4. — Khasya, Simons. Neer Macraei.

69. BULBOPHYLLUM CUMINGII. Huc: *Cirrhopetalum Cumingii* Lindl. — B. Reg. XXIV. sub 49.

Pseudobulbis tetragonis, folio oblongo obtuso scapo breviore, umbella dimidiata multiflora, sepalo dorsali petalisque ovatis acuminatis fimbriatis, lateralibus lineari-lanceolatis, labello ovato 3-sulcato pone basin bituberculato.

Philippines. — Flowers deep purple, whole coloured, with long yellow hairs on the petals and back sepal. Flowered in March 1841 with Messrs. Loddiges.

70. BOLBOPHYLLUM AURATUM. Huc: *Cirrhopetalum auratum* Lindl. in Bot. Reg. 1840. misc. 107.

Pseudobulbis oblongis angulatis, folio oblongo convexo, floribus umbellatis, sepalo supremo petalisque setaceo acuminatis fulvo ciliatis lateralibus acutis, labello lineari recurvo, columnae auriculis rotundatis integris.

Manilla. — Very like the last, picturatum, but much larger in the flowers, which are fringed with golden yellow hairs, giving them quite a distinct appearence. — Bot. Reg. 1842. XXIX. 61. — Bot. Reg. 1840. Misc. 107: Manilla. Loddiges March. 1841. — Perigonium flavum labello purpureo ut plurimum ornato sulco apice, sepalis supremis et petalis purpureo striatis, sepalis lateralibus purpureo adspersis, columna violacea.

71. BOLBOPHYLLUM VAGINATUM. Huc: *Cirrhopetalum vaginatum* L. n. 3. B. Reg. 42. sub t. 12. — Bot. Reg. XXIX. 1843. 49. Oct.

Pseudobulbis pyramidatis truncatis, folio oblongo convexo emarginato, vaginis scapi oblongis ventricosis distantibus, sepalo supremo ovato inferoribusque longissimis pendulis ciliatis, petalis oblongis ciliatis, labello oblongo bicarinato, columnae auriculis setaceis.

Sincapore. — *C. vaginatum* differs from C. Medusae in its flowers being ciliated, the petals oblong, not triangular and acuminate, and in the distant sheathes of the scape to which may be added that its flowers are not speckled with pink as in C. Medusae. — Bot. Reg. XXVI. 1840. Misc. 173: Sincapore. Cuming. Lodd. — Pale straw-colou-

red flowers in heads, with their anterior sepals prolonged into a fine thread nearly .2" long. Pseudobulbs are in the form of a truncated pyramid, the leaves coriaceous and emarginate.

Huc inserendum: *Cirrhopetalum caudatum* Wight Ic. V. 1856. n. 1658. — Pseudobulbs ovate, leaves from oblong elliptical to strapshaped, obtuse, emarginate: scape filiform, clothed with sheathing scales: bracts subulate, about the length of the ovary, lateral sepals very long, ending in very long spirally convolute filiform tails: posterior one and petals about equal, ovate, obtuse, and with the base of lateral sepals ciliate with remote bristly hairs: lip oval, 3-crested. Malacca Griffith. — Nescio, an sit praecedens, nec ne. In una figura saltem basis labelli valde cordata, in aliis non.

72. BOLBOPHYLLUM WIGHTII. Huc: *Cirrhopetalum grandiflorum* R. Wight Ic. V. 1851. tab. 1656. — Pseudobulbs conical, leaf pedicelled, linear, subtruncate, emarginate, scape nearly twice the length of leaves, 3—6 flowers, lateral sepals long, ovate, lanceolate, tapering to a point (about $1^1/_2$ inch long), posterior sepal ovate, acute and with the narrow almost subulate petals ciliate, lip short, fleshy, recurved, cordate ovate. Column of the flower greenish streaked and speckled with crimson, tending to purple; lip deep red, posterior sepal and petals yellow. — Ceylon: Nuera Ellia. — Walker.

73. BOLBOPLYLLUM PICTURATUM. Huc: *Cirrhopetalum picturatum* G. Loddiges in Bot. Reg. 1840. misc. 106. — B. Reg. XXIX. 1843. sub 49.

Pseudobulbis oblongis angulatis, folio oblongo convexo emarginato, floribus umbellatis: sepalo supremo ciliato setaceo-acuminato lateralibus oblongis obtusis, petalis acuminatissimis ciliatis villosis, labello lineari recurvo secus medium elevato, columnae auriculis obtusis integris.

East Indies. — A little plant with purple flowers, growing in flat umbels, and deeply stained with dark red. Its habit is that of a Bolbophyllum, its scape from 5—6" high. — Parad. Vind. fasc. XV.

b. *Tepala calva.*

74. BOLBOPHYLLUM BIFLORUM Tejsm. et Binnendik Naturk. Tijdschr. vor Nederl. Ind. Deel V. 1853: Bulbis approximatis ovatis quadrangularibus sulcatis, foliis solitariis loricatis acutiusculis basi contractis, scapis erectis foliis brevioribus bifloris, phyllis perigonii exterioribus lateralibus longissimis filiformibus acuminatis, supremo cucullato cirrifero, int. minutis subovato emarginatis acutatis, labello cordato acuminato integerrimo apice recurvato, gyn. apice bidentato. Salak Jav.

75. BOLBOPHYLLUM MEDUSAE. Huc: *Cirrhopetalum Medusae* Lindl. in Bot. Reg. 1842. tab. 12.

Pseudobulbis ovatis tetragonis, folio oblongo convexo emarginato, vaginis oblongis ventricosis supremo pedunculo longiore, floribus dense capitatis, sepalo supremo acuminato inferioribus longissimis pendulis, petalis triangularibus acuminatis, labello ovato acuminato bicarinato, columnae auriculis acutis.

Sincapore. — This in some respects resembles C. vaginatum, but is a much larger plant, and very different in the form of its flowers. — Labium flavuum, perig. ochraceum, rubro pictum. — Huc: De Vriese Illustr. t. 12. f. 2.

76. BOLBOPHYLLUM KAITIENSE. Huc: *Cirrhopetalum neilgherrense* R. Wight Ic. VI. 1851. n. 1654. — Leaves linear, obtuse, emarginate 3 nerved: scape shorter than the leaves: umbelled, 6—8 flowered; lat. sepals very long, broad, ovate, at the base tapering to a point, posterior one ovate acute nearly twice the length of the broad, subobovate blunt petals: lip short cordate, ovate, recurved, hairy on the back: prolonged base of the column pubescent within. Flowers first greenish yellow, tinged with pink marked with darker lines, afterwards becoming reddish or light rusty coloured, process of the column red. — Kartairy below Kaitie on moist rocks.

79. BOLBOPHYLLUM MACRAEI. Huc: *Cirrhopetalum Macraei* L. n. 6. Bot. Reg. 1841. misc. 105.

Folio oblongo petiolato, umbella pauciflora, petalis oblongis apiculatis falcatis nudis, sepalis acuminatissimis, labello a lata basi angustato carnoso canaliculato obtuso recurvo.

Ceylon. — This has the habit of C. Thouarsii. It has dull brownish yellow sepals, and purple petals, which are sulcate and the point turned forwards. — Bot. Reg. XXVII. 1841. 105: — Ceylon Lodd. (175).

Huc: *Cirrhopetalum Macraei* B. Mag. 442.

Pseudobulbis ovatis laevibus, f. solitariis oblongis acutis in petiolum attenuatis, scapis folio longioribus, racemis vix umbellatis laxifloris, sep. lanceolatis acuminatis, lateralibus longissimis, supremo apice acuminatissimo incurvo, petalis ovatis acuminatis, columna utrinque alata apice longe bidentata, labello ovato-acuminato carnoso recurvo.

C. Macraei LO. 58. — Deep yellow mixed with purplish brown B. Mag. 4422.
Huc: *Cirrhopetalum Walkerianum* R. Wight Ic. V. 1657.

80. BOLBOPHYLLUM ACUTIFLORUM. A. Rich. in Ann. sc. nat. Bot. XV. Pl. 7. p. 19.

Rhizom. repente. Pseudobulbis ovoideis, subcompressis, nudis, apice monophyllis; folio unico terminali, vix petiolato, coriaceo, crasso, elliptico, apice obtuse bilobo; scapo radicali, gracili, basi vaginato, apice 2—3 floro; floribus fasciculatis, pedunculatis, bractea ovali-lanceolata acute stipitatis; sep. exterioribus lateralibus basi valde obliquis, appressis, lanceolatis acutissimis, supremo ovali-acuto breviori; interiorib. brevissimis ovali-obtusis, apice mucronatis, lab. carnoso, arcuato, angusto, obtuso, gynost. laevi, apice circa antheram inaequaliter denticulato, poll. 4 inaeq. per paria agglutis.

In arb. sylv. humid. circa Otacamund Sept. Neilgherries Perrotet. — Sep. blanc rosé, labelle vert, pale. Sect I. Lindl.

Huc: *Cirrhopetalum albidum* R. Wight Ic. 1851. 1653: Leaves oblong elliptic, obtuse emarginate, flores umbelled, about the length of the leaves: bracts somewhat boat-shaped, shorter than the pedicels: sepals all acuminate, posterior a little shorter than the lateral ones: petals broad, ovate obtuse: lip short, fleshy, subsagittate. Flowers very pale, greenish yellow or nearly cream colour. — On moist rocks, St. Catharine's Fall, near Kotigherry Aug.-Sept.

81. BOLBOPHYLLUM ELLIAE. Huc: *Cirrhopetalum Macraei*? (Lodd.) Wight Ic. V. I. 1851. 1652. — Petals apiculate, naked: sepals all acuminate: leaves oblong, lanceolate; obtuse, emarginate, about the length of the scape. Lindl. Flowers pale green with brownish red veins. — Ceylon, Nuera Ellia, on trees, flw. May. Col. Walker: „yellow streaked and dotted with deep red". — Lip in this plant small recurved, thick and fleshy.

82. BOLBOPHYLLUM ROXBURGHII. Huc: *Cirrhopetalum Roxburghii* Lindl. Orch. B. Reg. 1843. XXIX. sub 49. (L. n. 2.)

Foliis lanceolatis, umbella radiata multiflora, petalis ciliatis acutis, sepalis omnibus acuminatis, lateralibus dorsali sexies longioribus.

East Indies. — Leaves three or 4" long. Flowers yellow; the upper sepal and the petals veined with purple.

(*Obs.* Nescio, num huc pertineant haecce species sequentes.

A. *Cirrhopetalum carinatum* Tejsm. et Binnendik Naturk. Tijdschr. vor Nederl. Ind. Deel. V. 1853.

Bulbis oblongis compressis, foliis elliptico oblongis acuminatis solitariis, *pedunculis* elongatis apicibus subito refractis, fl. subumbellatis longe *bracteatis*, ph. perigonii exterioribus acuminatissimis, carina-

tis, lateralibus spiruliformis, contortis, supremis brevioribus, interioribus minoribus trinerviis longe aristatis apicibus aduncis, labello oblongo cordato basi subtus gibboso apice recurvato, gyn. bidentato.

Salak Jav.

B. *Cirrhopetalum elongatum* Lindl. — Lindl. B. Reg. XXIX 1843. sub 49. — (Ephippium elongatum Blume Bijdr. p. 309.)

„Foliis e bulbis oblongo-lanceolatis basi carinatis, floribus in pedunculo elongato supremo dense spicatis, sepalis acuminatis."

Java.

C. *Cirrhopetalum capitatum* Lindl. — B. Reg. XXIX. 1843. sub 49. — (Ephippium capitatum Blume Bijdr. p. 309.)

„Bulbis oblongis compressiusculis, foliis oblongo-lanceolatis, floribus capitatis, sepalis elongatis acuminatis, margine revolutis."

Java.)

83. BOLBOPHYLLUM PAHUDI. Huc: *Cirrhopetalum Pahudi* De Vr. Illustr. Tab. III. XI. 1.

„Rhizomate repente, pseudobulbis oblongis, sulcatis; foliis elliptico-oblongis, acuminatis; scapis radicalibus elongatis, rubellis et viridibracteatis, apice inflexis; floribus 10—12 maximis, terminalibus, umbellatis, coronam quasi constituentibus; pulchre purpureis, minutissime obscure rubro punctatis; perianthii foliolis externis longissimis, apicem versus filiformibus, interioribus brevioribus angustioribus, labello columnae basi dilatatae et productae mobilis articulationis ope affixo, primum carnoso, crasso adscendente, deinde vero deorsum inflexo, angustato, acuto; columnae brevioris latiorisque crassae apice fere truncato, lateribus cornuto, medio apice mucronulato."

C. flagelliforme Tejsm. et Binn. Mss.

Sect. *BRACHYANTHA*.

84. BOLBOPHYLLUM UMBELLATUM Lindl. in Wall. Cat. n. 1984. LO. n. 48. Bot. Reg. XXXI. 1486. 44:

Rhizomate repente, pseudobulbis longis angulatis, foliis solitariis oblongis loratis obtusis subemarginatis scapis foliis aequalibus, floribus umbellatis, sepalis lateralibus obliquis falcatis obtusis majoribus, supremo rotundato nano, petalis ovatis obtusis, labello cordato ovato complicato integerrimo emarginato, columna marginata setis duabis hinc unidentatis aucto, polliniis 4 reniformibus posticis minimis muco apice cohaerentibus.

Nepal. 1821. Wall. Khasiya hills: Mr. Gibson. — Pale straw coloured flowers spotted with purple; column whitish; lip purple. — The column has two long horns, which have a single tooth on the upper side in all specimens we have examined. The poll. masses are as is customary in the genus of very unequal size; the front pair almost concealing that behind; and in this case are held together by some soft mucus, which resembles the gland of Vandeae, but is destitute of its firmness and permanence. — B. Mag. t. 42. 61.

85. BOLBOPHYLLUM RADIATUM Lindl. Orch. 55.: Lindl. in Hook. Journ. of Bot. VII. p. 34.: „Hongkong. Abundant in a ravine on Victoria Peak. Flowers white. It is identical with the Tavoy plant."

SUPPLEMENTUM.

1) ad n. 16: BOLBOPHYLLUM CUSPIDILINGUE: Huc *Cirrhopetalum Blumii* Bot. Reg. XXIX. 843. sub 49. (L. n. 4. Ephippium ciliatum Blume Bijdr. 209. tab. 65.)

Folio lineari-lanceolato, scapo unifloro, petalis pubescentibus acutis,

sepalis omnibus acuminatis, dorsali canaliculato inferne ciliato, labello orbiculato longissimo cuspidato, columna bicorni.

Java.

2) ad n. 84: BOLBOPHYLLUM VIOLACEUM: *Cochlia violacea* Blume Tab. 59. Bijdr. 320. — Lindley G. et Sp. p. 46.

3) Pone Nr. 66?: MACROLEPIS Ach. Rich. Astrol. p. 29:

Flores spicati, perigonii membranacei foliola erecta, exteriora 2 basi lata acuminata, lateralia paulo majora cum columnae pede connata; interiora conformia nana; labellum cum pede columnae articulatum, erectum, oblongum, lineare carnosum anceps, basi dilatata subconcavum utrinque lobulis 2 subobsoletis auctum; columna basi longe producta elongata, semiteres, apice antrorsum bicornis; anthera bilocularis, pollinia?

MACROLEPIS LONGISCAPA Rich. Astrol. p. 29. t. 10.

Epiphyta rhizomate repente pseudobulbifero, pseudobulbis monophyllis; foliis planis! coriaceis ellipticis acutis, scapo laterali tereti elongato, floribus spicatis, bracteis coriaceis lobis amplexicaulibus stipatis.

Vani Kero N. Guineae.

1357. EPICRANTHES *Blume.*

Bijdr. 306. Tab. 9.

1. EPICRANTHES BARBATA Rchb. fil. Huc: *Monomeria barbata* Lindl. Sert. Frontisp 1840: Imperfect spec. from Nepal. Wallich. — Abs. of pet! Fimbrias petaloideas Lindl. non reperit in pl. suis, uti Wall. delin. — Habit of a large Bulbophyllum. From a large creeping rhizoma spring ovate pseudobulbs covered with the ragged remains of the scales out of which they originally proceeded; each 2" long, bears a single leaf. Leaf rather less than a foot long, oblong, leathery, deep green, veinless, obtuse, a little downy beneath, with the chanelled foot stalk nearly as long as the blade. Raceme rather shorter than the leaf, erect, proceeding from the base of a pseudobulb, pale green, spotted with dull purple, with about 2 sheathing scales below the origin of the flowers. Each flower is about an inch long, with respect to the axis of growth. Of the sepals the upper is triangular, acuminate, nearly plain, dull olivegreen, much shorter than the 2 lateral ones, which are placed below the lip, a little united with each other at the base, where they are fixed upon the long foot of the column in such a way as to form a kind of blunt spur; on the outside they are very light green, smooth and dotted with light purple; on the inside they are hairy, yellowish, and irregularly spotted with bright purple. The petals appear to me to be wholly absent, but in Dr. Wallichs figure they are represented as two ragged lines. The labellum is articulated with a very long foot of the column, horizontal, dull yellow, three lobed, the lateral lobes being falcate and emarginate, the intermediate one ovate, with continuous acute plates, united into pairs, parallel with its margin. The column is short, half round, extended at the base into a long slender curved foot, on which the sepals and labellum are inserted; with the 2 upper angles in front produced into short points. Anther is downy, one celled, with a fleshy even crest. The pollenmasses are 4 on the same plane, 2 interior being the smallest, and all consolidated into a roundish oval ball, without the slightest trace of a caudicle or gland.

1362 b. PORPAX *Lindl.*

Bot. Reg. XXI. 1845. Misc. 66.

Sepala subaequalia, in tubum connata, lateralia basi oblique et pedi producto columnae adnata. Petala nana, libera. Labellum carnosum, cum pede columnae articulatum, basi tuberculo auctum. Columna nana, teres, aptera. Pollinia 8, per paria inaequalia.

Pseudobulbi depressi, dense catenatim consociati, diphylli. Flores solitarii, sessiles, terminales. — Nearest Eria, habit of Trias, calyx of Masdevallia.

PORPAX RETICULATA Lindl. l. c.

Pseudobulbi depressi, mutua pressione subangulati fibris pallidis pulchre reticulati. Labellum serratum, tuberculo basali cornuto.

Pseudobulbs produced a pair of little oblong leaves at their point, and between the leaves peeped forth a small dull red flower, ³/₄" long.

Sepals: the lateral ones a little oblique and prominent at the base. Petals ovate, dull purplish red, very short. Labellum articulated loosely with the extended foot of the column, ovate, hastate, fleshy, serrate, with the sides of the base erect, and a single slender tooth standing up between the side in the middle of the base. Column short, extended in a long foot, earless, and wingless. Anther opercular membranous. Pollinia 8, in pairs, one mass in each pair being smaller than the other. — Huc porro (cf. etiam Lindl. Garden. Chronicle 1861. 598):

AGGEIANTHUS R. Wight Ic. V. I. (1851) 1737.

Sepals equal, cohering, tubular; the lateral ones connate, with the prolonged base of the column, broad ovate rounded, papilosely hispid at the apex, truncated and furnished at the base with a subulate toothlike process, 3 nerved in axis. Column erect, concave above. Anther 2 celled, cells obsoletely 4 celled with 4, or by abortions? fewer obovate pollinia in each. Stemless plants. Pseudobulbs aggregated, depress flattened, netted all over; leaves small 2—5, sheathing, ovate, acute, membranous: bracts suborbicular; cuspidate, parallely manynerved: flowers tubular, vase shaped (whence the name), dull brick red colour, externally glabrous, pilose within: petals obovate, spathulate with a longish claw, pubesent; the lip when spread out is somewhat trowell shaped at the base and orbicular at the point.

The horn-like process at the base of the lip not well shown in the fig. 13. is very peculiar. The number of pollinia seems inconstant as shown in the two fig. 12 and 13. and I have seen as few as four, always presenting spatulate outline shown in the plate. Fig. 14. was introduced by the artist, without reference to me on the usual form of which in the order it does not much resemble but which it may be. As I did not see it, I thought it best to retain it, when preparing the drawing for transmission to the press.

AGGEIANTHUS MARCHANTIOIDES. R. Wight l. c. 1737: Growing in broad patches somewhat resembling a Marchantia (which suggested the name) on moist rocks on the Iyamally Hills towards Paulghat. Jul. Aug.

1363. ERIA *Lindl.*

(Bot. Reg. 904. — Walp. Ann. III. 530.)

Vastissimum genus, quod hodie ad illas notulas, quas dedit cl. Lindley in „contributions to the orchidology of India" ex parte quidem digerere placet.

§ 1. *Conchidium* Griff. „Thin leaves, almost stemless habit, smooth flowers."

1. ERIA BRACCATA Lindl. l. c. 46. *Dendrobium braccatum* Lindl. Orch. 75. Huc: *E. uniflora* Dalzell Hook Journ. Bot. III. p. 111.

Pseudobulbis sphaericis depressis apice diphyllis, foliis oblongis planis basi angustatis complicatis, scapo gracili foliorum longitudine apice unifloro, sepalis lateralibus falcatis acutis, sepalo supremo petalisque subaequalibus linearibus acutis, labello petalis breviore, lobis lateralibus abbreviatis lunatis purpureo-marginatis lobo intermedio lineari obtuso intus longitudinaliter bicristato. — Fl. temp. pluviali.

This pretty species grows in clusters on the bark of the Mango and other trees; the flower is white and very large for the size of the plant, viz., two inches across. The pollinia are eight in number, wedgeshaped, and united by threads at their narrow end; the leaves are one and a half to two inches long, and the scape about the same length, and furnished at its base with a keeled obtuse linear sheath.

Huc porro: ERIA RETICOSA R. Wight Ic. V. I. 1637. (1851.):

Caespitose, stemless, pseudobulbs orbicular, depressed, enclosed in a net-like sack: leaves about two, elliptic, spreading: scape filiform, 1 flowered furnished at the apex with a large somewhat boat shaped bractea: flowers larger, resupinate, expanding; sepals and petals about equal, exceeding the obscurely 3 lobed lip. Flowers pure white, lip and column yellow, bract brownish.

On branches of trees about Pycarrah in profusion, fl. May, June. It seems to be met with more or less in flower the greater part of the year. It is very remote in habit from other Eria.

2. ERIA JERDONIANA. Huc: *E. Lichenora* Lindl. l. c. Huc: *Lichinora* R. Wight. l. c. Ic. V. 1738.

Sepals adhering at the base, posterior one longer, somewhat galeate; lateral ones connate with the prolonged base of the column, ovate, obtuse, petals linear, lanceolate, shorter than the sepals; lip subrhombeo-ovate, acutish, articulated, with the long base of the column. Anther terminal, 2 celled, with 4 pollinia in each. Stemless plants, pseudobulbs thin, flat, adhering like lichens to the branch on which they grow (whence the name), leaves paired, broad, ovate, suborbicular, cuspidate pointed, reticulately veined, large in proportion to the rest of the plants, glabrous: flowers axillary, paired, short pedicelled, hairy; bracts obovate, somewhat boat-shaped, densely ciliate, lateral sepals hairy within.

Leaves at first green, afterwards changing to purplish brown. Flowers tawny coloured. — 1738 LICHINORA JERDONIANA R. W. Malabar Mountains, on branches of trees. Mrs. Jerdon.

3. ERIA PUSILLA Lindl. Contrib. to Orchid. of India. Huc; *Phreatia uniflora* R. Wight. Ic. V. I. 1734 (1851):

Repent, pseudobulbs globose, about 2 leaved, leaves obovate cuspidate: scape longer than leaves, one flowered: bract large, cordato ovate, acuminate: lip lanceolate acuminate, 2 nerved.

Khassia Hills and Chunassang: Griffith.

3 b. ERIA MICROCHILOS Lindl. Contrib. to the orchidology of India p. 47. *Dendrobium microchilos* Dalzell in Hook. Journ. Bot. III. 345:

Pseudobulbis profunde bilobis, lobis orbiculatis valde depressis reticulatis epidermide albida, foliis 3—4 linearibus obtusiusculis superne subplanis basi angustatis ibique scapum floriferum vaginantibus, floribus alternis secundis spicatis, bracteis ovato-subulatis ovario longioribus, capsula sessili ovata glabra, sepalis e basi lata acuminatis, petalis conformibus aequilongis angustioribus, labello ovato indiviso subduplo longioribus.

Herba pusilla, 2— 3-uncialis. Scapus filiformis, multiflorus. Flores straminei, mi-

nuli. Folia ½ — 2 poll. longa, 2½ — 3 lin. lata, pseudobulbi folia non gerentes. — Crescit supra arbores, praecipue in ramis Mangiferae Indicae, in regno Warreensi; fl. Aug.

4. ERIA FILIFORMIS. Huc: *Dendrobium filiforme* R. Wight. Ic. V. 1. (1851) 1642:

Caespitose, pseudobulbs depressed, flattened, suborbicular, netted on the surface; leaves 2—3, ovate oblong, somewhat obtuse, slightly cuspidate; raceme erect, filiform; few, 2—3-to many (10—12) flowered; bracts ovate, acute, longer than the ovary; sepals much attenuated subulate, pointed, dilated at the base, adnate to the process of the column forming a short obtuse saccate spur: petals about equalling the sepals and nearly thrice as long as the narrow ovate lip. Flowers straw colour.

Neilgherries and Jyamally Hills near Coimbatore, on branches of tree Bombay-tay. Bracts more boatshaped, than represented. The Figure of column and lip more highly magnif., than the other dissections.

Huc porro: *D. Dalzelli* Hook. in Hook. Journ. Bot. IV. 292 (1852). *D. fimbriatum* Dazl.

Pseudobulbis caespitosis orbiculatis valde depressis reticulatis epidermide albida, foliis paucis (4—5) linearibus obtusiusculis mucronatis basin versus complicatis, scapo centrali solitario tereti apice florifero folio intimo breviore, bracteis alternis bifariis subulatis ovario sessili triplo longioribus, floribus 10—20 secundis stramineis minutis, sepalis petalisque subaequalibus falcatis acutis patentibus margine glandulis capitatis fimbriatis, labello petalis duplo breviore oblongo basi carnoso etuberculato medio apice margine membranacea lacerata reflexa alba terminato.

Folia suprema (1—2) 3—6 poll. longa, 5 lin. lata, inferiora valde abbreviata. Flores 2½ lin. longi. — Crescit in arboribus ad Ram Ghât; fl. Julio.

On my first gathering this Orchid I thought it was merely a robust variety of Dendrobium microchilos (mihi), described in vol. III. of this Journal, but a nearer examination proved it to be a distinct species. The margins of the petals and sepals are beautifully friged with capitate glands in a double row, while in D. microchilos the margin is naked; but the greatest distinction is in the lip, which in D. microchilos is fleshy throughout, much narrower towards the apex, and furnished with two tubercles at the base. The habit of both plants is well illustrated by Wight's „Icone,s" No. 1642, which represents one of them, though I am really unable to say which.

5. ERIA SINICA Lindl. Contr. 48. Huc *Conchidium Sinicum* Lindl. sp. n.; Bentham Flora Hongkongens. in Kew gard. misc. VII. 34.

Foliis membranaceis scapo bifloro subaequalibus, labello serrato, bracteis acuminatis.

This curious little plant forms pale green tufts, which easily escape observation. It is distinguished from Conchidium pusillum, Griff., which is Phreatia uniflora Wight, by its thin leaves, and very short two-flowered scapes; the lip is moreover very distinctly serrated. (Lindl.)

On bare rocks, on the top of Victoria Peak, flowering in November. It is caespitose, with numerous aggregated pseudo-tubers. Leaves minute, oblong, apiculate, veinless except the midrib, 3—4 lines long, in pairs on each tuber. Scape filiform, about as long as the leaves, solitary on each tuber, bracteate at the top, and having two flowers nearly as large as the leaves, of a dirty yellowish-green, and slightly fetid. Sepals and petals nearly equal, the side sepals broader at the base and cohering with the saccate spur. Column very short and rounded. Anther-case somewhat 3-lobed, imperfectly 4-celled. Pollen-masses 8, cohering by pairs into two sets. (Champ.)

6. ERIA NANA A. Rich. Ann. Sc. nat. nouv. Ser. XI. 1842. 19.

Pseudobulbis nudis ovoideis; foliis saepius binis, membranaceis, inferiori breviori obovali-oblongo obtuso, basi sensim angustato, superiori longiori subacuto; scapo gracili, foliis vix longiori, 2—4 floro; floribus subsessilibus, spicatis, sepalis lineari-lanceolatis, acutissimis, labello unguiculato, sepalis dimidio breviori, arcuato, erecto, columnae approximato lineari-lanceolato, acutissimo, supra unguem dilatato.

In sylvis humidis inter muscos in monte vulgo des Condas Nilgherries. Oct. Perrotet. Affinis E. pumilae Lindl., sed glaberrima. Folia tenuia, membranacea, non plicata, sepala linearia.

§ 2. *Acervata:* Pseudobulbosa foliis coriaceis floribus solitariis laevibus. Inter pseudobulbosas quasi Callostylis!

7. ERIA ACERVATA Lindl. Paxt. Fl. G. I. 170. — Journ. Hort. loc. VI. 57. — Walp. Ann. III. 330: diagnosis. — Peculiar the stem when fully formed being nothing more than a collection of pseudobulbs or compressed bodies in form not unlike a flat flask, and piled one over the other in a singular manner. — Flowers white, smooth, slight tinge of green. The foot of the column is neither chambered nor toothed. In all respects this plant is so entirely an Eria, that it is referred to that genus, although in the flowers examined the number of pollenmasses was 4, instead of 8. But this may have been accidental. In its three ridged lip, reflexed bracts, it so strongly calls to mind that genus, as to raise a reasonable presumtion that the number of pollenmasses would in more perfect flowers be as usual.

§ 3. *Xiphosium* Lindl. l. c. Pseudobulbosae foliis coriaceis floribus spicatis seu racemosis laevibus sublaevibusve.

8. ERIA ROSEA Lindl. B. Reg. 978: Lindl. in Hook. Journ. Bot. VII. 34: Hongkong, on rocks. M. Gough: flowering in January. It is also a Khasiya plant, it being undoubtedly the Xiphosium acuminatum of Griffiths Ic. 316.

9. ERIA STELLATA Lindl. B. Reg. 904. B. Mag. 3605.

10. ERIA COCHLEATA Lindl. — Bot. Reg. XXX. 1844. Misc. 23.

Foliis lanceolatis coriaceis 5 costatis, sepalis glabriusculis petalisque lineari-lanceolatis, labello basi costis 5 apice 3 undulatis lineato: lobis lateralibus obtusis intermedio oblongo-spathulato, scapo elongato radicali multifloro ovarioque alte costato cochleari glabris.

Manilla. With very much the appearance of E. stellata, from which it differs in having smaller flowers, a smooth scape and a shining ovary with high ribs, which are twisted, so as to have the appearance of a very deep pale threaded scren. Sepals are very green, petals and lip white, the latter painted with crimson veins at margin. Loddiges imp.

11. ERIA SPECIOSA Rchb. fil. MSS. *Tainia speciosa* Bl. Bjdr. *Mitopetalum speciosum* Bl. Mus. Lugd. Bat. II. 185.

12. ERIA BICORNIS Rchb. fil. MSS. *Ania bicornis* Lindl. B. Reg. XXVIII. 1842. Msc. 41

Folio oblongo lanceolato carnoso scapo breviore, labelli lobo medio emarginato apiculato ecalcarato basi billamellato, lamella altera versus apicem interjecta, anthera bicorni.

Ceylon. *coll. Rev. J.* Clowes. Flowers green except the lip, which is bright yellow. — *Appearance of* Eulophia macrostachya. — Bot. Reg. XXX. 1844: Labellum cum *basi producta columnae* articulatum. Anthera bilocularis. — It belongs to a little *group of the Epidendrous* section, of which Bletia is the type, and is nearly allied to *A. latifolia*, a sylhet plant, at present only known from dried specimens; from *that it differs in having* much smaller flowers and leaves, an entirely different in-

bellum, and a two celled anther, that of A. latifolia being eight celled. In the latter circumstance indeed it corresponds with the neighbouring genus Cytheris, whose distinctive character is therefore not to be taken from the cells of the anthers, but from its resupinate flowers and truly calcarate labellum. In Ania the labellum if it appears to have a spur, as is A. angustifolia, owes that appearance to the extension of the foot of the column. — Bl. Mus. Lugd. Bat. II. 185: Mitopetalum bicorne.

13. ERIA ANIA Rchb. fil. Mss. *Ania latifolia* Lindl. Orch. 130. Huc: *Calanthe viridifusca* Hook. (Bot. mag. t. 4669). Lem. jard. fl. t. 386. — Lindl. in Paxt. Fl. 9. III. 118. Gleanings N. 591: Assam, Sylhet. Nearly allied to Bletia and Phajus, from which the spur on the one hand, and the threelobed lip accompanied by a 6—8 celled anther distinguish them on the other. — By some oversight that now mentioned has been referred to Calanthe in B. Bot. 4669.

Rchb. fil. in Bonpl III. 250. *Ania latifolia* Lindl.? Ein einziges Exemplar mit verwelkten Blüthen und ohne Antheren. Hongkong. Hance! — Lindl. in Hook. Journ. of Bot. VII. 35: Major Champion states that this or an allied species grows on the island; but he has preserved no specimen.

14. ERIA WIGHTII Rchb. fil. Mss. Huc: *Ania latifolia* Lindl. Wight. Ic. Pl. Or. 1844. Vol. III. II. 914. — Not having the original drawing by me, I am at present unable to give the station of this plant, but believe Pulney mountains. I suspect it is not the species described by Dr. Lindley, differing as it does so materially in the character of the lip and its lamellae, neither do I feel quite certain that the structure of the anther case is the same as in his, but as I have not the specimen at hand to ascertain that point by examination, I am for the present compelled to leave the matter in a state of uncertainty. — Huc: Mitopetalum Wightii Bl. l. c.

15. ERIA BARBATA Rchb. fil. Mss. *Tainia barbata* Lindl. Gardn. Chronicl. (Erioidea Griff.)

16. ERIA PAUCIFOLIA. Huc *Mitopetalum plicatum* Bl. Mus. Lugd. Bat. II. 185. *Octomeria paucifolia* Kuhl V. Hass. Tab. XI. — Huc: *Tainia fimbriata* Tejsm. et Binnend. Naturh. Tijdsch. Neederl. Ind. V. 1853.

Foliis ovalibus acuminatis longe petiolatis membranaceis plicatis, scapis lateralibus spicatis 8—14 floris; phyllis perigonii oblongis acutiusculis, labelli trilobi lobo medio obovato acute crenato intus lineato fimbriato lateralibus acuminatis.

Salak.

§ 4. *Dendrolirium*: Pseudobulbosae foliis coriaceis, spicis tomentosis.

17. ERIA ORNATA Lindl. G. et Sp. Orch. 66: Huc: *E. armeniaca* Lindl. B. Reg. XXVII. 1841. Misc. 70:

Pseudobulbis ovatis compressis triphyllis, foliis oblongo-lanceolatis coriaceis laevibus, racemo tomentoso radicali basi vaginato stricto foliis aequali vel longiore, foliis scapi bracteisque lanceolatis acuminatis subcoriaceis (armeniacis), labelli lobis lateralibus dentiformibus intermedio rhombeo crispo; lamellis 3 rectis haud crispatis lateralibus abbreviatis divergentibus intermedia versus apicem labelli producta. Labellum apice rubrum, lamella violacea, laminae pars posterior alba violaceo marginata.

Beautiful. Philippines: island of Negros and elsewhere abundantly: Cuming. Lodd. Its flower stem, 1', bears a great number of large tough apricot-coloured scales and bracts. Flowers are a dull dirty brown, not at all pretty. This is the first of the Erias with large coloured bracts, that we have seen; several exist in Java accord. Dr. Blume. The species is near Dendrolirium ornatum of the author, but the bracts are not red, nor revolute at the margin, the leaves are not strongly ribbed, nor are the lamellae of the lip at all the same. — Huc: De Vriese Illustr. tab. XVI.

18. ERIA PROFUSA Lindl. Bot. Reg. XXVIII. 1842. Misc. 8.

Pseudobulbis ovalibus apice diphyllis, foliis oblongis striatis racemis pubescentibus multifloris brevioribus, bracteis squamaeformibus pedicellis brevioribus, sepalis tomentosis, petalis lineari-oblongis obtusis, labello trilobo laciniis lateralibus erectis laevibus, intermedia subrotunda rugosa apice tuberculo solitario oblongo cristata.

Ceylon, found by Mr. Nightingale, sent to His Grace the Duke of Northumberland. Flowers appear in numerous racemes, nearly a foot long, and are soft with brown down. The labellum is bright light green.

19. ERIA PULCHELLA Lindl. in Wall. Cat. 7407. — Bot. Reg. XXVII. 1841. Misc. 106

Pseudobulbis ovatis stipitatis diphyllis, foliis oblongo-lanceolatis obtusis, racemo lanato erecto terminali et laterali, bracteis ovato-subrotundis patentibus, perianthio explanato subaequali incano, labello subrotundo-ovato apiculato plano medio convexo discolore, basi trilineato.

Rhizoma repens, pennae anserinae crassitudine. Racemi 2" longi. Perianth. luteum intus et extus lanatum. Petala sepalis parum minora. Labellum medio elevatum, fuscum, limbo luteo, subcordatum, apiculatum, planum. Pes columnae luteae rugosus fuscus. — This little species was originally described from a specimen brought from India by Dr. Wallich, who had received it from Mr. Finlayson without a locality. It was then gathered at Sincapore by Mr. Cuming, from whom we have some fragments, and it has flowered with Lodd. The flowers are in spikes, which in Mss. Lodd. specimen preceeded from the side of the pseudobulbs, but which also appear to be terminal, they are dull clayey yellow of no great beauty.

§ 5. *Mycaranthes* Rchb. fil. in Bonpl. V. 55: Caulis foliosus. Racemi laterales. Sepala lateralia non obliqua sed recta.

20. ERIA TOMENTELLA Rchb. fil. Mss. Huc *Eria javensis* Zoll. Mor.

21. ERIA OBLIQUA Rchb. fil. Mss. Huc *Mycaranthes obliqua* Lindl. Bot. Reg.

Foliis lato-linearibus carnosis canaliculatis apice oblique emarginatis scapo brevioribus, sepalis lateralibus carinatis, labelli cuneati 5-lobi callo apicali majore axi pube densa decidua farinam referente vestita.

A fleshy leaved plant from Sincapore, with very small white flowers, covered slightly with rusty down. Cuming imp., flw. Loddiges (124).

22. ERIA STRICTA Lindl. Coll. Bot. 41. B. Huc: *Mycaranthes stricta* Lindl. in Wight Ic. V. 1851. 1738:

Stem terete: spike secund, dense manyflowered; lip with a scrotiform callosity in the middle: perianth woolly, short; margins of the column winged, introflexed, leaves 1—2 linear lanceolate sessile.

Communicated by Mr. Griffith from Malacca, from Mergui, Assam, Khasia.

§ 6. *Trichosma*: Caulis teres diphyllus. Folia laevia glabra. Spica terminalis pauciflora.

23. ERIA CORONARIA Rchb. fil. Mss. Huc: *Coelogyne coronaria* Lindl. B. Reg. XXIX. 1841. Misc. 178.

Pseudobulbis teretibus angustissimis diphyllis, foliis lanceolatis acuminatis undulatis coriaceis obsolete trinerviis, racemi pedunculo basi tantum squamato longioribus, bracteis setaceis apice spathulatis, labelli lobis rotundatis lateralibus planis, intermedio undulato, cristae lamellis crispis in lobum intermedium 5 in hypochilium 4 tantum geminatis; clinandrio trilobo, anthera antice rotundata fornicata.

From the Chirree district of the Khoseea hills of India, found by Mr. Gibson for the Duke of Devonshire. It has firm bright green, not shining, leaves of a leathery

texture and very pale greenish yellow flowers, whose lip has a yellow centre, and a border beautifully streaked and spotted with crimson.

Huc porro B. Reg. XXVIII. 1842. 21 :

TRICHOSMA Lindl.

Sepala patula, aequalia, lateralia basi producta columnae pedi adnata. Petala conformia, erecta. Labellum trilobum, cristatum, cucullatum, cum pede columnae articulatum. Columna carnosa, marginata. Anthera carnosa, fornicata, bilocularis, valvis verticalibus margine sphacelatis. Poll. 8, quaternatim cohaerentia, duobus cuique phalangi minoribus difformibus. Epiphyta, ebulbis, caule squamis verrucosis vestito diphyllo. Folia subcarnosa petiolata. Spica terminalis, basi spathacea.

Differs from Coelogyne in the projecting foot of the wingless column, in the singular fleshy anther and in the 8 pollens. It is more nearly allied to Ceratium, but the genus according to Blume has a two celled anther, 4 of the pollenmasses very small, a siliquose fruit, and the inflorescence opposite the leaves. Indeed as it is described as caulescent, with sessile lanceolate coriaceous leaves, it seems to be altogether a different kind of plant.

Trichosma suavis Lindl. l. c.

Columna semiteres, carnosa, marginata. Anthera carnosa, antice projiciens rotundata, fornicata, bilocularis, valvis verticalibus, margine nigrosphacelatis. Poll. 8, cereacea, libera, quaternatim cohaerentia; duobus cuique phalangi ovalibus, duobus cuneatis emarginatis.

Leg. Gibson: Chirra district of the Khoseea, and grows upon trees in densely shaded woods near the summit of the hills.

24. ERIA EPHEMERA Rchb. fil. Huc: *Eria bicolor* Lindl. in Contributions to the Orchidology of India pag. 58. — *Dendrobium bicolor* Lindl. (Jam exstat et Eria bicolor Lindl. Orch. pag. 65 — imo etiam cingalensis, sed racemosa!)

25. ERIA PAUCIFLORA R. Wight Ic. V. 1. 1851. 1638.

Caespitose, stems erect, succulent, joints thickened at the apex, with a leaf at each joint, last joint thickened, tuberous, surmounted by two leaves, from between which rises the short 1- or 2 flowered raceme: leaves ovate, oblong, obtuse; flowers longish pedicelled: sepals about equal or slightly longer, than the narrow linear petals: lip somewhat corrugated furnished with 2 lamellae near the base. Flowers white.

Growing on moist rocks, forming dense masses exposed to the spray of the river below the Kaitie Falls, Neilgherries. Flowers Aug. Sept. Stems become like pseudobulbs at the apex.

26. ERIA NUTANS Lindl. — Bot. Reg. XXVI. 1840. Misc. 196.

Caule tereti folioso, foliis oblongis undulatis substriatis basi canaliculatis, flore campanulato solitario terminali nutante glabriusculo, bractea plana patente carnosa subrotundo-ovata, sepalis lateralibus duplo latioribus basi rotundatis apice petalisque obtusis, labelli trilobi lobis lateralibus erectis, intermedio transverso carnoso, apiculato: linea una per axin producta infra apicem interrupta et magis elevata, duabus lateralibus abbreviatis prope sinus.

Flower white, beneath it a roundish ovate flesh coloured thick bract. The tip of petals and labellum is yellow. Sincapore. Cuming. Loddiges. (129).

§ 7 *Cylindrolobus* (nec Lindl. nec Bl.): Caulis foliosus. Folia laevia glabra. Racemi seu spicae oppositifoliae pauciflorae.

† *Tonsus.*

27. ERIA MUCRONATA Lindl. — Bot. Reg. XXVIII. 1842. Misc. 27.

Caulibus elongatis flexuosis, foliis distichis lineari-lanceolatis acuminatis, floribus solitariis glabris oppositifoliis, bracteis 3—5 ovato-lanceolatis patentibus coloratis, sepalis petalisque ovatis erectis, labelli subrotundi 3lobi lacinia intermedia ungue scopulifero, lamellis 3 membranaceis integerrimis quarum intermedia in mucrone libero abit, lateralibus abbreviatis.

Habit of Dendrobium chrysanthum. Sincapore, Cuming. Leaves are long, fleshy, finely acuminate. deep green. Flowers are white, with a faint tinge of pink, deliciously sweet like violets, and produced singly opposite the leaves, on stalks about half an inch long, covered with dullred spreading bracts. — The intermediate lamella extended into a short horn, which runs up from the surface of the lip a little below its apex. On the foot of the lip is placed a small brush consisting of numerous fine yellow glandular hairs. In addition to the usual number of pollenmasses are a few extra of very small size.

†† *Lanatus.*

28. ERIA PANNEA Lindl. — Bot. Reg. XXVIII. 1842. Misc. 79.

Ebulbis, foliis distichis pugioniformibus, scapo unifloro (?) dense lanato quasi panneo longioribus, sepalis lateralibus triangularibus supremo petalisque pluries majoribus, labello lanceolato acuminato carnoso pubescente disco farinaceo.

Sincapore imp. Lodd. (252). It has narrow dagger-shaped leaves of a pale yellow green, and a single greenish-yellow flower, woolly on the outside, and seated on a short scape covered with whitish cloth-like substance. The label is purplish slightly hairy, and has a broad patch of a mealy hairiness a little below its point.

§ 8. *Trichotosia* Bl. Mus. Lugd. Bat. II.: Praecedens, sed ipsa folia vulpino pilosula.

29. ERIA FEROX Blume Mus. Lugd. Bat. II. huc: *Trichotosia ferox* Bl. De Vriese illustr. tab. 9 et tab. 11. 5.

30. ERIA CILIATA Miq. Ind. bat. „1856". Huc: *Trichotosia ciliata* Tijsm. et Binnendijk. Naturk. Tijdsch. Nederl. Ind. V. 1853.

Caule elongato ad insertiones foliorum pilis ferrugineis annulatis, foliis alternis lanceolatis acuminatis carnosis rufo-ciliatis, utrinque pubescentibus subtus punctatis, phyllis perigonii exterioribus rufo pilosis apicibus carinatis, int. linearis (ibus?) membranaceis, labelli limbo erecto emarginato.

Salak.

31. ERIA VULPINA Rchb. fil. in Bonpl. III. 222.:

Aff. E. vestitae Lindl., labelli ungue lineari lamina longiori, lamina obtuse quadrata basi utrinque unidentata, tuberculo in basi ante unguem. Caulis calamum anatinum crassus. Vaginae uti folia. Bracteae, pedunculus, ovarium, sepala rufo pilosa. Folium oblongum acutatum nervosum quinque pollices longum, duos latum. Pedunculus ultra bipollicaris. Bracteae oblongae acutiusculae (cymbiformes?), ovariis tertia breviores. Sepala in saccum obtusum elongata. Tepala lineari falcata. Labelli unguis supra apicem pedis gynostemii brevissimi adnatus.

2071. Cuming. Phil.

32. ERIA VELUTINA G. Lodd. in litt. — Bot. Reg. XXVI. 1840. Misc. 209.

Caule tereti velutino, foliis distichis carnosis ovato-lanceolatis margine revolutis junioribus utrinque velutinis adnatis supra glabris, flore solitario oppositifolio inter squamas herbaceas obtusas villosas sessili, sepalis petalisque linearibus apice recurvis extus hirsutis, labello cuneato elongato canaliculato apice rotundato subtrilobo supra pubescente inappendiculata.

Sincapore. Cuming. Loddiges. It has pale dirty yellow flowers growing singly among hairy bracts opposite the leaves. It is probable, that Wallich's Dendrobium vestitum, of wich I have only seen fragments of flowers, is a species of Eria allied to this, and it is certain, that among the distributed specimens of that plant are branches of the present species without flowers.

Huc: Regel in Sem. bot. petrop. 55: Caulis elongatus foliis bracteis floribusque velutino-pilosis. Folia disticha, oblongo-lanceolata, utrinque attenuata, sessilia, obtusiuscula, $2\frac{1}{2}$—$3\frac{1}{2}$ pollices longa, $\frac{3}{4}$—1 pollicem lata, obscure viridia. Racemi oppositifolii, foliis multoties breviores, erecti, pauciflori, bracteis subrotundis herbaceis muniti. Flores parvi, luteo-brunnei, sepalis erecto-patentibus, lanceolatis, obtusiusculis, vix $\frac{1}{2}$ lineam longis, lateralibus subfalcatis, basi cum pede columnae connatis, calcar obtusum aemulantibus; petalis lineari-ligulatis, obtusis, sepalis minoribus; labello cuneato-oblongo, apice obtuso, supra lineis duabus conniventibus pilosis notato, petalis breviore. Columna semiteres, aptera, basi longe producta. Anthera terminalis, bilocularis. Pollinia 8.

33. ERIA FERRUGINEA Lindl. — Bot. Reg. XXV. 1839. 35.

Caulibus teretibus articulatis vaginatis, foliis oblongis obtusis, racemo erecto laterali multifloro basi squamato, bracteis ovatis acutis ovario villosissimo brevioribus, labelli lobis lateralibus erectis truncatis, intermedio ovato serrato subplicato: disci cristis 4 dentatis, intermediis carnosis incurvis.

Sepala viridia, petala et labellum et gynostemium alba roseo picta. — Calcutta. Loddiges imp.

34. ERIA VESTITA Lindl. — *Dendrobium vestitum* Wall. Cat. 2005. LO. 33. — Bot. Reg. XXX. 1844. Misc. 79.

E. caulibus pendulis villis deciduis dense vestitis, foliis coriaceis lanceolatis apice obliquis obtusis integris supra parce, subtus densissime villosis, racemis elongatis multifloris flexuosis bracteis ovatis coriaceis persistentibus floribus capsulisque villosis, sepalis lanceolatis lateralibus in cornu obtuso porrecto connatis mucronulatis, petalis conformibus obtusis brevioribus glabris, labelli trilobi laciniis lateralibus obtusis, intermedia subrotunda crispa emarginata pilosa per axin linea elevata interrupta velutina dentibusque paucis aucta, lamellis 7 quarum duae lanceolatae sinus fere attingentes et quinque parvae dentiformes.

Structure of a woolly Eria, habit of a pendulous Dendrobium. A native of Indian Archipelago. Wallich's collection had it from Sincapore, Cuming sent it from Manilla (?). It is singularly clothed with a thick reddishbrown hairiness. The flowers are reddishbrowin externally, white inside, and hang down in pendulous spikes, which are longer than the leaves.

Bot. Reg. XXXI. 1845. 2. — Philippines: „Lagune" in a small flowered state: Cuming. (Perigonium intus albidum, labelli lamina medio flava, perigonium extus miniatum.)

§ 9. *Eriura* Lindl. l. c.: Caulis foliosus. Folia glabra. Racemi laterales floribus extus lanatis, labello per axin furfuraceo, apice seu apice et basi tuberculato.

35. ERIA PANICULATA Lindl. in Wall. Pl. As. rar. Vol. 1. p. 32. t. 36. — Bot. Reg.

XXVIII. 1842. Misc. 33. — Flow. Lodd. Had exactly the appearance of Dr. Wallich's figure with long narrow taper pointed leaves and panicles of small greenish flowers slightly freckled with purple. They have a line of fine white powder formed all along the middle of the lip, and burrying the tubercle, which occurs at the base. This powder consists of a vast multitude of pyriform bodies visible only under the microscope, and of the same nature as those which occur on Polystachya. They are in fact extremely short hairs of one joint tapering to the base; in appearance they resemble fine powdery dust.

§ 10. *Hymeneria* Lindl. l. c. et *Urostachya* l. c.: Caulis foliosus. Folia glabra. Racemi laterales floribus extus calvis seu subcalvis. Labellum non furfuraceo-callosum.

36. ERIA RINGENS Rchb. fil. in Bonpl. 222.:

Aff. Eriae pubescenti Wight., glabra, bracteis ovatis acutis, labelli ungue brevissimo, lamina oblonga acuminata basi rotundata, gynostemii androclinio utrinque semiovato brachiato, angulis anticis medio omnino muticis. Caulis carnosus bulbosus (cylindraceus? planus?), siccus dimidium pollicem latus. Folia oblongoligulata basi cuneata, apice inaequali acuta, tres quatuorve pollices longa, unum pollicem lata. Spicae oppositifoliae duos tresve lineas longae apiculatae reflexae ovariis pedicellatis subaequales. Perigonia longiuscula (tres lineas longa); glaberrima. Mentum obtusum. Sepala et tepala lancea acuta!

2129 Cuming. Phil.

Obs. Haec species ab ill. Lindley in Contrib. to the Orchidology of India refertur ad Eriam ovatam Bot. Reg. Vidi specimen Eriae ovatae in herbario Lindleyano et habeo etiam ejusdem auctoris analysin depictam. Plantae meae labium ovatum acuminatum laeve, planta Lindleyanae oblongum subtrilobum apiculatum, carina obliqua utrinque in basi.

37. ERIA PUBESCENS Bot. Reg. Wight Ic. V. 1. 1851 1634. — (*E. polystachya* in Icon) Stem leafy, short, clothed at the base with sheathing scales: leaves lanceolate tapering at both ends, acute, marked with strong longitudinal veins: racemes slender, drooping; rachis and pedicels pubescent, flowers resupinate, bracts as long as the pedicels, lanceolate acuminate: sepals and petals a little longer than the lip, glabrous, falcate, attenuated towards the point, threenerved: lip oblong, threenerved, subcoriaceous at the base, contracted in the middle; limb lanceolate, acute, margins membranous reflexed. Flowers white, perianth tipped with pink. — Western slopes of the Neilgherris, flowering in Aug. et Sept. — Very nearly all. to the next (polystachya).

38. ERIA POLYSTACHYA A. Rich. — Ann. sc. nat. nov. Sr. XI. 1841. p. 20. tab. 9.:

Caule brevi incrassato pseudobulbiformi subtereti, basi laxe vaginato; foliis subterminalibus, membranaceis, elliptico-oblongis, acutis, venosis basi vaginantibus; floribus albis, pedicellatis, spicatis, bracteatisque; spicis axillaribus, foliorum longitudine aut paulo brevioribus, bracteis ovalibus longe acuminatis, pedunculi longitudine, sepalis externis pubentibus, acutis; internis tenuissimis trinerviis, oblongo linearibus, obtusis; labello breviori, oblongo integro, subcanaliculato, acuto, basi interne bicristato.

Crescit supra arbores et saxa in sylvis humidis et umbrosis circa Neddoubetta. Sept. Neilgherries Perrotet. — Diff. ab E. flava florib. minoribus, labello elongato, prope integro.

Hue: *Eria polystachya* Ach. Richard. Wight Ic. V. 1. (1851) tab. 1635. — E. pubescens in Ic.). — Stem thickened, pseudobulblike at the base, loosely sheathed; leaves terminal, from oblong elliptical acute to obovate-elliptical, somewhat obtuse,

glabrous: spikes axillary, about the length of the leaves, erect, clothed with short pubescence, bracts lanceolate acute: sepals ovate, attenuated at the point; pubescent, exceeding the lanceolate petals: lip ovate lanceolate, about half the length of petals. — Neilgherries, western slopes, flowers in August. Septb. — Lip in analysis should be only half the size.

39. ERIA FLORIBUNDA Lindl. Wall. Cat. n. 7408. — Bot. Reg. XXIX. 1843. Misc. 56.

Caulibus carnosis subflexuosis teretibus, foliis lanceolatis acuminatis, racemis oppositifoliis patulis multifloris pubescentibus foliis brevioribus, bracteis defloratis ovatis concavis retrorsis, sepalis triplo latioribus, labello angusto nudo basi saccato: laciniis lateralibus ascendentibus abbreviatis intermedia cuneata tridentata.

A caulescent species, with lanceolate leaves 7—8". The flowers are small, pink, smooth, in close spreading racemes much shorter than the leaves. The column is dark purple at the top. Mr. Prince originally found it at Sincapore, and communicated it to Dr. Wallich. Msrs. Loddiges have since received it from the same place through Mr. Cuming. — It is a pretty plant, worth cultivation. — Bot. Reg. XXX. 1844. 20: Labellum basi cyathiforme, melliferum, bidentatum, columnae adpressum, sursum unguiculatum, cuneatum, apiculatum, inflexum, columna paulo brevius. — Along with E. polyura, bipunctata, profusa, and some others it forms a small group of species which are very different in habit from such plants, as E. pannea, armeniaca etc.

Huc: b. var. *leucostachya* Lindl.: *Eria leucostachya* Lindl. Journ. H. Soc. III. 1848. p XV. xyl. — Paxt. Fl. G. III. 116. Xyl. 286. — Borneo: Sarawak in large masses of trees. Flower spikes not unfrequently from 8—10 inches, each stem has several. — In absence of leaves, there was no means of determining how far it might be distinct from E. floribunda: its flower spikes were much more dense, and the flowers were wholly destitute of the pink tinge conspicuous in that species.

40. ERIA BRACHYSTACHYA Rchb. fil. in Bonpl. III. 223.

Caule ac foliis prope Eriae paniculatae Lindl., spicis oppositifoliis plurimis abbreviatis, bracteis lanceolatis acutis ovaria glabra aequantibus superantibusve, labello cuneato flabellato, antice trilobo, lobo medio semiovato acutiusculo, lobis lateralibus obtusangulis, carinulis geminis curvato divergentibus a basi in medium, carina per discum lobi medii tomentosi.

Caulis adest spithamaeus. Folia lineari-lanceolata acuminata, subcoriacea apice inaequaliter bilobula, quatuor sive quinque pollices longa, quatuor lineas lata. Pedunculi semipollicares tenues, quadri-quinqueflori. Bracteae pergameneae. Flores illis Eriae profusae duplo majores, glabri. Mentum modicum obtusum. Sepala ovato lanceolata. Tepala duplo angustiora. Labellum sepalis brevius. Gynostemium brevissimum apice antice trilobum. 2063. Cuming. Phil.

41. ERIA CONVALLARIOIDES L. O. 70. — Bot. Reg. XXVII. 1841. 62.

Caulibus compressis junioribus dense et laxe vaginatis, foliis oblongo lanceolatis multinerviis, racemis densissimis oblongis cernuis breviter pedunculatis, floribus subglobosis leviter pubescentibus, labello subcordato ovato acuto inappendiculato. — Perigonium album.

Lodd. It has small whitish flowers, collected in close heads in the axils of broad striated leaves; they have no smell, and the species proves much less pretty than was expected. The specific characteristic LO. 70. made up chiefly from bad Indian drawings considered correct, especially as regards the flowers, destituted of hairs and the lip which is entire, and not 3—toothed. I also find that the anther is not dorsal, but merely contracted towards te back of the column, so as to expose the pollenmasses. The name convallarioides is unfortunate, for it can only bring to mind in India the

sweet Lily of the Valley of Europe and it is libel on the latter to compare it with this species. — Bot. Reg. XXVII. 1841. Misc. 121.

β. *major* Lindl. Bot. Reg. 1847. t. 63. Caulibus duplo majoribus spicis longius pedunculatis, floribus clausis globosis.

42. ERIA MULTIFLORA Lindl. Gen. et Sp. Orch. p. 68. — Bot. Reg. XXIX. 1843. Misc. 72.

Caulibus teretibus clavatis 2—3-phyllis, foliis lineari-lanceolatis canaliculatis, spicis multifloris, bracteis minimis sphacelatis, floribus pubescentibus, labello cuneato-obovato indiviso basi excavato nectarifluo supra foveam dentibus 2 membranaceis erectis aucto.

A rare little plant, from Mr. Van Houtte of Ghent, who received it from Java. It has small white flowers, covered externally with fine down. The only coloured part is the column, which is deep violet. In habit it resembles a small specimen of Eria floribunda.

43. ERIA BRACTESCENS Lindl. — Bot. Reg. XXVII. 1841. Misc. 46. — Bot. Reg. XXX. 1840. T. 29.

Pseudobulbis brevibus ovatis apice subdiphyllis, foliis oblongis undulatis racemis subaequalibus, bracteis margine revolutis superioribus linearibus reflexis, racemis erectis, labelli trilobi lamellis duabus abbreviatis intermedia producta lobo medio truncato rugoso obtuse apiculato.

Sincapore. Loddig. imp. (214). — Erect racemes of delicate straw-coloured flowers, and is readily distinguished by its large bracts. It is nearly allied to E. flavescens. The same plant has been found in Burmea by Mr. Griffith, from whence I have specimens, no 1055. It is rather pretty, but not strikingly handsome.

Huc: ERIA DILLWYNII Hook. Bot. All. 4163. — Bot. Reg. XXXI. 1845. Misc. 67.

Pseudobulbis oblongis laevibus 2—4 phyllis, foliis oblongis racemis subaequalibus, bracteis membranaceis oblongis obtusis reflexis, racemis erectis, petalis sepalisque erectis, labello trilobo basi lamellato, lobo medio obtuso rotundato 5 lamellato.

Philippines. Cuming. — Habit of E. long: labris. Profuse flowerer: two spikes of flowers on each of 8 pseudobulbs.

44. ERIA OVATA Lindl. — Bot. Reg. XXX. 1844. sub 29.

Foliis oblongis obtusis basi angustatis, racemis pubescentibus multifloris, bracteis parvis ovalibus reflexis, sepalis petalisque acuminatis, labello ovato-oblongo indiviso basi bicalloso.

This plant found in the Philippines by Mr. Cuming, evidently differs from the three others in the shape of the lip, which has no lobes, but an ovate-oblong form and a couple of little diverging plates near the base. It is nearest to E. longilabris in general appearance.

45. ERIA LONGILABRIS Lindl. — Bot. Reg. XXVII. 1841. Misc. 69. — Bot. Reg. XXX. 1844. sub 29 et in Tab. 29 fig. 3.

Eriae bractescentis facie sed sepalis petalisque magis acuminatis, labelli trilobi lamellis tribus ad apicem fere productis aequalibus lateralibus abbreviatis lobo medio ovato acuminato.

Panay in the Phillip., whence it was sent to Msr. Loddiges by M. Cuming. Bears more flowers, than E. bractescens and is distinguished at once by its lip.

46. ERIA OBESA Lindl. Wall. Cat. 1926. LO. 15. — Bot. Reg. XXX. 1844. sub 29.

Caulibus crassis ovalibus, sepalis petalisque lanceolatis acutis subglabris, labelli trilobi ecallosi lobis lateralibus obsoletis rotundatis: intermedio ovali retuso, racemis paucifloris pubescentibus, bracteis ovatis lanceolatis pedicello capsularum longissimarum vix aequalibus.

Martaban Wallich impf. ex. — Moulmein and Merg in Griffith. — Pseudobulbous stems are

27" long; the bracts ovate, reflexed, greenish dull purple; the flowers white with a tinge of pink and a yellow lip: they are arranged in short spreading racemes.

47. ERIA CLAVICAULIS Wall. in litt. — Bot. Reg. XXVI. Misç. 220.

Caulibus clavatis, foliis lanceolatis acutissimis, bracteis ovato-oblongis concavis recurvis, floribus glabris, sepalis lateralibus triangularibus acutis, dorsali petalisque subaequalibus ovalibus subundulatis, labelli trilobi lobis lateralibus ascendentibus rotundatis, inermedio oblongo supra carinato tomentoso infra sinus 2 tuberculato.

White. Its lip is downy along the middle, and all over the central lobe, and is bordered with pink round the lateral segments. Dr. Wallich sent it to Mr. Loddiges.

48. ERIA PLANICAULIS Wall. — Bot. Reg. XXVI. 1840. Misc. 4.

Caule compresso folioso erecto, foliis coriaceis aveniis obtusis emarginatisque, floribus glabris intra bracteas siccas striatas subsessilibus, labello reniformi supra unguem bicalloso, petalis linearibus, sepalis ovatis acutis multo angustioribus.

Forwarded by Dr. Wallich from the East Ind. Comp. Botanic Garden Calcutta 1838. Flowers creem-coloured, produced in a recurved massy cluster at the extremity of the stem, nearly concentrated by the brown scales and bracteas in which they are enveloped.

49. ERIA PUMILA LO. p. 68. — Bot. Reg. XXIV. 1838. Misc. 147.

Foliis anguste lanceolatis acuminatis, caulibus teretibus erectis subaequalibus, spicis capitatis lateralibus subsessilibus, ovario villoso, sepalis petalisque ovatis acutis basi tantum pilosis, labelli trilobi basi bilamellati pubescentis lobis lateralibus subulatis patentibus, intermedio quadrato bilobo apiculo interjecto.

Loddig. flowered it, who received it without name from the Bot. Gard. Calcutta. It has small capitate flowers, membranous and slightly tinged with pink: the horns of the labell, the column and anther being also pink. It was originally described in the above work from bad and broken dried specimens and is stated to have the middle lobe of the labellum ovate; but in reality that part is two-lobed with an intermediate point each lobe being ovate.

50. ERIA BIPUNCTATA Lindl. — Bot. Reg. XXVII. 1841. Misc. 179.

Caulibus ovalibus compressis, foliis lanceolatis acuminatis 11-nerviis, racemis axillaribus cylindraceis multifloris, bracteis ovatis acuminatis reflexis, alabastris globosis, sepalis petalisque ovatis obtusiusculis, labelli trilobi laevis laciniis lateralibus intermedio carnoso convexo rotundato angustioribus.

Chiaral distr. of the Khosea hills in India, Gibson. — Duke of Devonshire. Flowers of a Liparis, foliage of an Eria so far as general aspect goes. The stems are flat, oval, partially covered by the sheathes of fallen leaves, when full blown between two and 3 inches long, at first they are green, but they become, when old, of a light purplish brown colour. The leaves in size und form are very like those of Eria floribunda; to which this species is nearly allied. Flowers are arranged in cylindrical drooping racemes rather shorter than the leaves; they are perfectly free from downiness, except just at the base of the raceme, and are about the size of a grain of pepper, very pale, yellowish white, with the tip of the column purple, and the point of the labellum deep yellow, by which means the flowers seem as if they had two spots upon them, when they are looked at from the front.

51. ERIA ACUTIFOLIA Lindl. — Bot. Reg. XXVIII. 1842. Misc. 32.

Caulibus oblongis abbreviatis, foliis lanceolatis coriaceis acutissimis scapi longitudine 2—3" longis, racemo erecto (5—6) paucifloro pubescente, bracteis oblongis reflexis floribusque glabris, labelli lobis acutissimis erectis intermedio oblongo obtuso concavo glabro: venis tribus elevatis carnosis, clinandrio profunde excavato.

A small unattractive species imported from India by Msr. Loddiges (n. 200). — Flowers of a dirty white, with violet veins. The lip has a purple base, and a dull yellow tip. Classed near E. clavicaulis.

32. ERIA POLYURA Lindl. — Bot. Reg. XXVII. 1841. Misc. 114. — Bot. Reg. XXVIII. 1842. 32.

Caule elongato folioso, foliis lanceolatis acutis patentibus striatis, spicis oppositifoliis multifloris nutantibus foliis aequalibus v. brevioribus, bracteis ovario duplo brevioribus, adpressis, petalis sepalisque ovatis acutis erectis laevibus, labello cordato ovato acuto basi bicarinato.

Manilla. Cuming. Lodd. — Flowers small, white, lip deep crimson, yellow at the point. However graceful in consequence of every leaf producing a long drooping spike, from the opposite side of the stem. Near E. multiflora and micrantha.

1369. DENDROBIUM Sw.

Nov. Act. Ups. VI. t. 5. f. 5.

Generis nuper ab ill. Lindley in „Contributions to the orchidology of India" redacti supplementa edo, quae ad annum 1855 post edita genera et species Lindleyi nova edita sunt mutatis quidem mutandis in ordine.

Sect. I. *APORUM* Lindl.

Folia equitantia.

1. DENDROBIUM MICRANTHUM Lindl. Contr. Orch. p. 8. — *Aporum micranthum* W. Griff. Calcutt. Journ. IV. 1844. 276:

Foliis spalpelliformibus acutis, floribus solitariis terminalibus, sepalis lateralibus reflexo-revolutis, petalis anguste linearibus, labello porrecto trilobo intus processu carnoso truncato, lobo centrali erecto bilobo lobis crenulatis.

Hab. Insula Penang. — Planta rubro tincta. Caules spithamei aggregati. Folia subuncialia, fere verticalia. Flores minuti, inconspicui, viridescenti albidi, postici. Pedicelli solitarii, e paleis erumpentes, longiusculi. Sepala oblonga, subacuta. Petala multoties angustiora. Labellum albidum, cum pede columnae continuum, sublingulatum, lobo centrali erecto. Appendix (vel processus) carnosa lamelliformis basin lobi centralis versus praemorsa. Columna semiteres, pede longe curvato. Rostellum truncatum. Clinandrii brevis dens posticus minimus. Pollinia 4, oblonga per paria collateralia. — Penang intr. Lowes, Assist. Resid. in May. Flow. July. No beauty. The smallest flowered species of the genus I am acquainted with, and appears abundantly distinct.

2. DENDROBIUM NATHANIELIS Rchb. fil. MSS. in Schill. Cat. Orch. ed. 3. 1857 p. 26: Huc: *Aporum cuspidatum* Wall. in litt. — Bot. Reg. XXVII, 1841. Misc. 7.

Foliis lanceolatis, floribus solitariis axillaribus, labello emarginato apice crispo per medium obsolete bilineato.

A plant of no beauty, with the habit of Aporum anceps, but with much smaller flowers. It was sent by Dr. Wallich to Msr. Loddiges with the name it now bears.

3. DENDROBIUM ANCEPS Roxb. Ind. 497. (Sw. Act. Holm. 1800 p. 26?) Lindl. B. R. 1239. Bot. Mag. 3068. — Perigonium flaveolum basi sepalorum lateralium rubella. Alabastra multum rubra.

4. DENDROBIUM ALOEFOLIUM Rchb. fil. MSS. Huc: *Oxystophyllum macrostoma* Hasskarl, Tijdschrift voor Naturligre Geschiedniss X. 1. 122. (Macrostomium aloëfolium Blume.)

5. DENDROBIUM LEONIS Lindl. — Huc: *Aporum Leonis* Lindl. — Bot. Reg. XXVI. 1840. Misc. 126. — (*A. indivisum* LO. 70. nec Blumii).

Foliis coriaceis ovatis vel brevissime cultratis obtusis, floribus solitariis terminalibus, labello lineari-oblongo emarginato ecristato apice ciliato-dentato et minutissime pubescente.

Sincapore, found by Mr. Prince, who comm. it to Wallich with a rude drawing, upon which it was admitted by me into the LO. as synon. with A. indivisum of Dr. Blume. It having lately been brought home from the same place in a living state by Mr. Cuming, under the name of „Lions mouth" and Msr. Loddiges having sent it to me in flower, J am now able to state, that it is in reality a species distinct from that of Blume, in its labellum not having a transverse crest, and probably in other circumstances. It has therefore received a name in allusion to that just mentioned, which has arisen from a fancied resemblance beetween the reddish brown ringent flower and the narrow blunt undivided lip, which are compared to the jaws and tongue of a lion. However, notwithstanding this high sounding comparison, the plant is of no beauty.

6. DENDROBIUM SINUATUM Lindl. — Huc: *Aporum sinuatum* Lindl. — Bot. Reg. XXVII. 1841. Misc. 3.

Foliis lanceolatis aequilateris approximatis acutis, floribus solitariis axillaribus, labello cuneato elongato intra apicem linea hippocrepica crassa sinuata circumdato.

Sincapore. Cuming. — Habit of A. anceps, but its leaves are much narrower and longer, and the flowers are pale yellowish green. Loddiges (182).

7. DENDROBIUM COMPLANATUM All. Cunn. — Bot. Reg. XXV. 1839. Misc. 36. — An epiphyte growing in tufts. It has a flattened base and cultriform, distichous leaves: the whole plant although healthy, is of a yellow green colour. On dedd trees in shaded woods, at Moreton Bay. 1828. Flowers not seen. New South Wales. All. Cunn.

8. DENDROBIUM CARNOSUM Rchb. fil. MSS. — *Oxystophyllum carnosum* Bl. Tab. 58. Bijdr. 336.

9. DENDROBIUM RIGENS Rchb. fil. MSS. — *Oxystophyllum rigidum* Bl. Bjdr. l. c. 336.

10. DENDROBIUM EXCAVATUM Miq. Ind. Bat. 644. — *Oxystophyllum excavatum* Bl. l. c. 336.

11. DENDROBIUM ATROPURPUREUM Miq. l. c. — *Oxystophyllum atropurpureum* Bl. Rumphia IV. cf. Walp. Annal. III. p. 580.

Sect. II *STRONGYLE* Lindl. l. c.

Folia teretia.

12. DENDROBIUM TERETIFOLIUM R. Br. Prodr. Nov. Holl. 333. Huc. B. M. 4711. Huc: *Dendrobium calamiforme* G. Lodd. — Bot. Reg. XXVII. Misc. 26.

Caule repente annulato, foliis teretibus pungentibus, racemo laxo terminali folio breviore, bracteis minimis, sepalis petalisque erectis acuminatissimis, labello trilobo lineari lanceolato: lobo medio setaceo acuminato crispato: lamellis axeos 3 membranaceis planis versus apicem crispis.

A pretty and graceful Epiph. New Holland. Loddig. imp. Leaves 8" long. The flowers are seated on foot stalks nearly an inch in length, including the ovary, and a light yellow or cream colour, with the base stained with purple. The labellum is purple beautifully crisped and spotted towards the upper end.

13. DENDROBIUM STRIOLATUM Rchb. fil. in Otto Hbg. Gtz. 1857. 313. Huc Lindl. B. Reg. XXV. 1839. Misc. 29.:

Dendrobium teretifolium R. Br. Prodr. N. Holl. — Well defined by Dr. Brown. Small creeping species with deep green fleshy taper leaves, 2—3" long, solitary flowers of a dull yellow, streaked and spotted with dull purple; the labellum is white.

14. DENDROBIUM CANALICULATUM R. Br. Prodr. 333.

15. DENDROBIUM TERES Lindl. — Bot. Reg. XXVI. 1840. Misc. 111.

Caulibus gracilibus glabris, foliis carnosis teretibus obtusís, racemo terminali nudo, bracteis coriaceis spathaceis, floribus semiclausis longe cornutis, sepalis petalisque erectis acuminatis, labello cuneato apice truncato serrulato longius cuspidato: venis tribus pone apicem subcristatis, columna versus basin dente deflexo aucta.

Sincapore. Lodd. imp. Leaves of Vanda teres. Slender plant, with the leaves of Vanda teres, whitish fragrant flowers in terminal naked racemes. Lip is deeply stained with orange inside near the apex.

16. DENDROBIUM ACICULARE Lindl. — Bot. Reg. XXVI. 1840. Misc. 188.

Caule basi conico angulato sursum tereti, foliis acicularibus, flore solitario? terminali galeato, labelli postici trilobi per medium tricarinati lobis lateralibus rotundatis antice et intermedio ovato serrulatis.

Little species with the base of the stems angular and conical, while the whole of the upper part suddenly tapers and becomes very slender. It bears about 3 acicular leaves, from the axil of the uppermost of which springs the short peduncule, bearing at its end a cluster of small dry scales, from which proceed a single yellowish flower slightly tinged with pink. — Sincapore. Cuming. Loddiges (174).

17. DENDROBIUM JUNCEUM Lindl. — Bot. Reg. XXVIII. 1842. Misc. 11.

Caulibus fusiformibus erectis apice ramosis, foliis teretibus acutis pungentibus, pedunculis terminalibus bifloris, sepalis obtusis, labelli trilobi lobo medio rotundato emarginato subundulato disco scabro.

Sincapore. Lodd. (356*). — Rather large green flowers with faint purple veins on the side lobes of the labellum. Stems fusiform, erect and branched above the swelling; many of the ramifications being terminated by a pair of flowers.

18. DENDROBIUM ACEROSUM Lindl. — Bot. Reg. XXX. 1841. Misc. 86.

Caulibus brevibus teretibus glabris, foliis carnosis teretibus obtusiusculis, racemo terminali brevi paucifloro, bracteis membranaceis convolutis, floribus semiclausis longe cornutis, sepalis petalisque erectis acutis, labello cuneato emarginato apice cristato calvo.

A small plant from Sincapore, imp. by Loddiges, who bought it of Cuming. (387.)

19. DENDROBIUM CUCUMERINUM W. Mac Leay in litt. Lindl. Bot. Reg. 42. XXVIII. Misc. 631 — Bot. Reg. XXIX. 1843. 37.

Nanum, intricatum, caespitosum, racemis brevissimis articulatis cylindraceis monophyllis, foliis oblongis teretibus seriatim tuberculatis, pedunculis brevissimis trifloris, sepalis pedalisque linearibus acuminatis obtusis, labelli trilobi lobis lateralibus triangularibus intermedio ovato crispato lamellis 5 undulatis in medio, clinandrio denticulato.

New South Wales. — New Holland, sent to Mr. Loddiges from Mr. Wm. Mac Leay. Locality? Strange bodies are appearently leaves terminating the short articulated stems, but they require further examinations, for they may be of the nature of pseudobulbs. — Perigon. album, purpureo striatum. — B. Mag. 4619.

20. DENDROBIUM MODESTUM Rchb. fil. in Bonpl. III. 222.

Affine D. aciculari Lindl. caule gracillimo flexuoso, foliis acicularibus acutissimis bi-tripollicaribus, fasciculis florum oppositifoliis, sepalis laralibus in calcar extinctoriiforme productis, labello cuneato flabellato per discum tricarinato, antice trilobo, lobis lateralibus obtusatis antice denticulatis, lobo medio producto semiovato denticulato, hoc et parte anteriori loborum lateralium puberulo papulosis, gynostemio utrinque apice uncinato.

Caulis adest spithamaeus. Fasciculi florum erumpentes ex squamis abbreviatis albi-

dis. Ovaria pedicellata duas pollicis tertias longa. Flores illis Galeandrae gracilis subaequales. Sepalum superius lanceolatum acutum. Sepala lateralia acuta; aequilonga, basi producta. Tepala sepalo dorsali subaequalia. — Flores sicci flavo virides. Dendrobium aciculare recedere videtur flore solitario terminali postico — haud ita accurate descriptum: de pubescentia labelli nil affertur. Manilla. Llanos.

Sect. III. *CARNIFOLIA* Rchb. fil. MSS.

Folia carnosa crassa, non teretia. (Rhizobium Lindl. ex p.)

21. DENDROBIUM LINGUAEFORME Sw. — Bot. Reg. XXV. 1819. Misc. 26. — Near Sidney, New South Wales, where it was found by the earliest Botanist, who visited that colony. It has hard, thick tongue shaped leaves, lying flat upon the rhizoma, which creeps upon the rock or tree it grows on; they have the texture of an Aloe, and probably indicate, that the spec. does not inhabit damp shaded places, but rather such not dry situations, as Mr. Cunningham assigns to Dendrobium aemulum and undulatum see Bot. Reg. 1699. obs. Flowers greenish white, with long slender sepals and petals, and appear from the young ends of the rhizoma. They have no smell, nor any feature of beauty.

Obs. Huc? : *Dendrobium ? crassulaefolium* All. Cunn. — Bot. Reg. XXV. 1839. Misc. 35. — „Of this I have no specimens or description. It is a plant growing on trees in ravines of the Blue Mountains. Never seen in flower. The pseudobulbs are oval and oneleafed; the leaf is small and oval". — All. Cunningh. (in New South Wales Orch. Epiphytes).

Sect. IV. *PLANIFOLIA* Rchb. fil. MSS.

Folia bene plana.

A. Caulis plurifoliosus.

a a. *Eudendrobium* Lindl. Inflorescentia lateralis pauciflora. Tepala sepalis aequalia. — Labellum dilatatum. Mentum amplum.

I. Labellum idivisum.

a. Flos albus, roseus, brunneus, non aureus.

22. DENDROBIUM SUPERBUM Rchb. fil. MSS. Huc: *Dendrobium macrophyllum* Lindl. Bot. Reg. XXV. 1839. Misc. 46.

Caulibus pendulis, foliis ovato oblongis obtusis nervosis basi subcordatis, sepalis lanceolatis lateralibus parum productis, petalis oblongis acutis, labello pubescente convoluto denticulato subunguiculato ovato, callo baseos elevatò transverso obsolete trilobo.

Manilla. Cuming. Loddiges. — Flowers 9" circumf. and will probly be still larger, when the plant becomes more healthy. The sepals and petals are a clear and bright rose-colour, the lip is downy and deeply stained with 2 large broad blood-red blotches at its base.

Huc: Lindl. Sert. 1840. N. 35: Flowers like those of nobile, purple all over, leaves full 4" long by two in breadth; stems pendulous. — At the base of the lip there is a threelobed callosity, which lies across the channel, that leads from the apex to the unguis. It is worthy of the especial consideration of Botanists, that this callosity is absent in D. coerulescens and nobile; we learn that the absence or presence of such projection is not of generical importance. The hairy ridge, which runs down the middle of the lip in many allied species is missing. — 12 fl. on one stem. — Huc: Pescatorea t. 40.

Huc „*D. macranthum* Bot. Mag. 3970. Lindl." — Van Houtte Flore des Serres VIII. 757 et Pl. 3 (habitus).

b. ANOSMUM. Rchb. fil. Huc: *Dendrobium anosmum* Lindl. — Bot. Reg. XXI. 1844. Misc. 41.

Facie omnino D. macrophylli et colore; sepalis ovato-lanceolatis, petalis oblongis planis nec oblongo-lanceolatis undulatis; labello subrotundo acuto.

Philippines. — Its app. is = D. macrophyllum, but

1) its flowers are scentless and have not the strong smell of rhubarb.
2) they are smaller
3) all the divisions of the flower are shorter, broader, ad even, instead of being undulated.

Whether or not it is really a species, experience will show: it is at all events a remarkable variety.

c. GIGANTEUM. Huc: *Dendrobium macrophyllum* var. *giganteum*. Lindl. G. Chronicle 1844. 219. — At the last meeting of Hort. Soc. MSS. Veitch produced a variety of this well known species with flowers fourtimes as large as usual. From Continent.

d. PURPUREO MARGINATUM. Huc: *D. macrophyllum* Lindl. var. purpureo marginatum. De Vriese Illustr. tab. 17.

23. DENDROBIUM NOBILE LO. 24.

Caulibus teretibus acutis, foliis oblique emarginatis obtusis, floribus geminatis, sepalis ovalibus, petalis duplo majoribus undulatis, labello ovato subrotundo cucullato villoso.

China. — Flowers large, showy, violet, with a very dark purple stain in the interior of the lip.

Lindl. Sert. t. 8: M. Reeves bought it on the market at Macao. — Stems erect, clustered, light green, a foot and more high, compressed, with deeply furrowed joints about ³/₄ of an inch. Leaves rather distichous. Peduncles axillar, 2—3 flowered. — Petals oblong, obtuse, rather wavy, very delicate and transparent, the same colour as the sepals. — Lip rolled up, very shortly unguiculate, downy both inside and outside, in form obovate, with a deep notch on each side separating it into three obscure lobes, of which the laterals are crisp at the edge, the central one even rounded obscurely cuspidate in colour, deep bloodred in the tube, pale greenish yellow at the edges and disk, tinged with purple at the end; a linear downy space passes upwards along the centre from the unguis still it loses itself in the disk.

Huc: *Dendrobium coerulescens* L. Sert. n. 17. — Bot. Reg. XXX. 1844. Misc. 62.

Facie omnino D. nobilis, floribus nunc ternatis, petalis angustioribus margine reflexis valde undulatis, labello ovali acuminato intus villoso.

E. Indies. — The petals and the lip principally distinguish it from D. nobile. Its flowers are also smaller.

Sert. n. 17.: Caule erecto carnoso tereti, foliis oblongis obtusis emarginatis subundulatis, racemis horizontalibus 2—3 floris foliis paulo brevioribus, perianthio explanato, sepalis lineari-oblongis obtusis emarginatis lateralibus basi paulo productis, petalis latioribus oblongis apice recurvis, labello ovali subundulato utrinque pubescente apice constricto plano glabro recurvo, anthera pubescente.

Dendrobium coerulescens Wall. MSS. — Sepals and petals have a delicate tinge of very pale bluish lilac, on their back especially. Form more slender. Specifical differences are furnished by the shape of the lip and sepals, both of which are much narrower, than in Dendr. nobile and the former has quite a different outline. — Nungklow, on the northern face of the Khoseea range of hills, where it grows upon rocks and trunks of trees at an elevation of 4000' (30—40 flw. !). — Sepals 1¹/₂" long ¹/₄" wide, delicate bluish lilac, tinged with deeper purple at their end and slightly pitted all over between the veins as to acquire a somewhat tesselated appearence, notched at the apex. Pet. coloured like the sepals, except that they are rather darker and less tesselated. Lip oval, concave, sides rolled round the column at the base,

curved outwards and undulated; rich crimson in the middle, yellow at the edge, deep rosecol. at the apex, covered with conspicuous pubescence every where exc. at the point. Column is very short, flat, sloped forwards in front, convex at the back; termin. by a peaked, purple, hairy anther.

Sert. 18. 1838.

24. DENDROBIUM LINAWIANUM Rchb. fil. MSS. Huc: „*D. moniliforme* Sw." Lindl. B. Reg. XVI. 1830. 1814 et Hook. B. Mag. Ser. III. Vol. 1. 4153:

Caulibus erectis clavatis ramosis foliosis internodiis demum tumidis, foliis distichis oblongis obtusis oblique emarginatis, floribus ex articulis supremis caulium geminatis folio longioribus, sepalis oblongis acutis, petalisque ovatis striatis, disco elevato pubescente.

Perigonium roseum, basi albidum, labellum albidum apice intense kermesinum maculis quibusdam kermesinis.

Obs. De vero D. moniliformi Sw.! alio loco.

25. DENDROBIUM TORTILE Lindl. Gard. Chron. 1847 p. 797 c. ic. — B. Mag. 4777.

Caulibus clavatis articulatis sulcatis vaginatis, foliis linearibus retusis subcoriaceis, pedunculo bifloro, sepalis oblongis acutiusculis undulatis tortilibus (petalis conformibus), 2 lateralibus in calcar retusum decurrentibus, labello magno pubescenti villoso obovato-cochleariformi basi intus pulvinato.

Perigonium albidum, labellum lilacinum et albidoflavum.

Obs. Planta obscuro obscurior est haec: *Dendrobium tortile* All. Cunningh. — Bot. Reg. XXV. 1839. Misc. 31. — On the upper branches of the loftes and trees of Flindersia australis, 100' high; in shaded woods, Brisbane River, Moreton Bay. Oct. 1824. June 1828. New South Wales. — All. Cunningham.

26. DENDROBIUM PULCHELLUM Roxb. LO. 85. — Bot. Cab. t. 1985.

b. DEVONIANUM. Huc: *Dendrobium Devonianum* Paxt. Mag. I. 169. — Bot. Reg. XXX. 1844. Misc. 62.

Caulibus pendulis, foliis ovato lanceolatis acutis, pedunculis 2—3 floris, sepalis oblongis acutis integris, petalis duplo latioribus fimbriatis, labello maximo cochleariformi margine plumoso.

The King of Dendrobium: Khoseea Hills of India. — Sepals rose-colour. Petals and lip lemon-colour, tipped with purple, the latter with a broad yellow blotch in the middle.

Dendrobium Devonianum B. M. 4429.

Caulibus elongato-cylindraceis articulatis striatis proliferis, junioribus foliiferis, foliis lineari lanceolatis distichis submembranaceis acuminatis, floribus (5—6) aggregatis, sepalis lanceolatis integerrimis, petalis ovatis acutis ciliatis apice purpureo-maculatis, labello cucullato amplo latissime cordato pulcherrime plumoso fimbriato intus maculis 2 aurantiacis apice emarginato purpureo, calcare brevissimo.

Huc: Van Houtte VII. tab. 647. — Lem. Jard. fl. tab. 11.

27. DENDROBIUM PIERARDI Roxb. LO. 79. N. 22. — Bot. Reg. XXI. 1836. 1756: Delta of the Ganges on Mangoe Trees. — The lip is rounded and very blunt, and its basis is rolled into a much longer stalk, which quite conceals the column; it is more over remarkably incurved. — Pendulous from trees. — Wight Ic. Pl. Ind. Or. III. II. 908. 1844.

var. *latifolium:* Van Houtte Flore des Serres IX. 955.

28. DENDROBIUM CUCULLATUM Brown. — Bot. Reg. XXI. 1835 sub 1656 (huc B. R. (548). — Bot. Reg. XXX. 1844. Misc. 62.

Facie omnino D. Pierardi, sed labello subrotundo-ovato basi in unguem brevem convoluto.

E. Indies. — Extremely like D. Pierardi, but it has larger flowers with a broad roun-

dish ovate lip, the base of which is rolled up into a sort of short stalk; while in D. Pierardi the lip is rounded and very blunt, with its base rolled into a much longer stalk which quite conceals the column. It is moreover remarkably incurved.

29. DENDROBIUM CRETACEUM Lindl. B. R. 1847. 62:

Foliis lanceolatis apice oblique emarginatis obtusiusculis; floribus solitariis (?), sepalis lineari-lanceolatis patentissimis obtusiusculis; labello subrotundo indiviso cucullato fimbriato-dentato, utrinque pubescente, basi foveato et obsolete trilamellato; mento brevi obtuso.

Ind. or. at Mergui and Khasiya hills. Flores candidi, lineae labelli purpureae. — V. H. VIII. 818. — B. Mag. 4686. — Lem. Ill. 8. 334.

30. DENDROBIUM EGERTONIAE Lindl. Bot. Reg. 1847. t. 36. adn.

Caule tereti erecto, basi ebulbi; foliis?, floribus binis-quaternis, sepalis linearibus obtusis, petalis angustioribus, labello ovato obtuso unguiculato, parum undulato basi ciliato, superne margine laeviusculo, intus villoso, columna antice glabra, basi bicamerata; anthera pubescente, calcaris apice etuberculato.

Groecit in India or.? — Near D. mesochlorum, but the flowers not ½ size. The sepals are pale pink outside, there is very little appearance of a purple stain on the tip of th petals and lip, and the middle of the lip is dull yellow, not green; there is moreover no tubercle at the back of the point of the spur, and the lip is not fringed except on its base. If it is less showy a species than D. mesochlorum, it is not on that account less valuable, for its flowers are delightfully scented towards evening. Obt. from Saharampore. — Paxt. Fl. G. I. xyl. 44.

31. DENDROBIUM MESOCHLORON Lindl. — Bot. Reg. 47. t. 36 adn.

Caule tereti erecto basi ebulbi, foliis lanceolatis acuminatis; floribus subquaternis, sepalis ovali linearibus obtusis; petalis angustioribus, labello ovato obtuso unguiculato undulato fimbriato praesertim basi intus villoso; columna antice glabra, basi bicamerata foveata; anthera pubescente; calcaris apice a tergo gibboso.

India Veitch. — Allied to D. crumenatum. — Flowers white, with a violet spot at the end of petals and lip, and with a green stain in the centre of the latter. — Paxt. Fl. 9. Xyl. 43.

32. DENDROBIUM CREPIDATUM Lindl. — Paxt. I. 63. N. 99. xyl. 45.

Caulibus teretibus erectis, foliis ...., floribus geminis, sep. oblongis obtusis firmis, labello oblongo integro subsinuato obtuso lateribus erectis intus levissime pubescente, basi utrinque plicato venoso, cornu brevi obtuso.

Flowers white, tipped with pink, deep yellow in the middle of the lip. Firm texture of a Lycaste. Lip has form of old-fashioned slippers, which, without a hollow for the foot, were merely latched.

33. DENDROBIUM TRANSPARENS Wall. Cat. n. 2008. — Bot. Reg. 1844. Misc. n. 62 (XXX).

Caulibus pendulis teretibus, foliis ovato-lanceolatis acuminatis apice obliquis, floribus geminatis, sepalis acuminatis, petalis obtusis, sepalo supremo majoribus, labello oblongo undulato ciliolato obtuso intus levissime pubescente.

Nepal. — Flowers pale rose-colour, with a lip of the same tint. Very like D. Pierardi, from which it is distinguished by its leaves being longer and emarginate at the apex, by the petals being obtuse and the labellum much less hairy, and pink, not yellow. The stems are also shorter. — Paxt. Fl. G. I. p. 134. Tb. 27: Nepal. Wall. Stems formerly described as pendulous. — Veitch imported it from Myrong, Garrow hills. 5800'.

Huc: *D. Henshalli* Rchb. fil. Bonpl. III. 226:

Aff. D. heterocarpo, labello ab ungue obcuneato subito dilatato ob-

tusangulo hastato antrorsum oblongo obtuso subtilius et rarius velutino, petalis angustioribus, mento breviori.

Blüthen so gross, wie die des D. heterocarpum, weiss; Lippe mit rosafarbigen Adern, zwei violettpurpurne Flecken beiderseits der Mitte, vorn gelbweiss. — Cultur des Hrn. Lüddemann in Hrn. Pescatore's Garten.

Huc: B. Mag. 4663. Lem. J. Fl. tb. 68.

34. DENDROBIUM AMOENUM Wall. LO. 21. — *Limodorum aphyllum* Roxb. Corom. I. t. 41. — *Cymbidium aphyllum* W. sp. f. 4. — Bot. Reg. XXXI. 1844. Misc. 62.

Stems clouded with dusky brown when in blossom. Dr. Wallich remarks in his MSS., that its delicate fragrance is exquisite, not unlike that of Olea fragrans.

Caulibus pendulis gracilibus nebulosis, floriferis aphyllis; foliis lanceolatis acutis; floribus geminatis racemum spurium formantibus longe pedunculatis divaricatis; sepalis oblongis obtusis; petalis obtusis sepalo supremo paulo majoribus: labelli cucullati limbo ovato obtuso crenulato leviter ciliato, disco villoso.

Flowers of a delicate white, with obtuse segments, each of which is beautifully tinged at its apex with violet. Lip cucullate marked internally towards the base with greenish yellow.

35. DENDROBIUM MACROSTACHYUM (Lind.) Wight Ic. V. I. 1851. 1647.

Stems terete, pendulous: leaves oblong, acute, flat: flowers paired, fragrant, forming a spurious raceme: sepals linear oblong, acute, the upper sepal larger: lip unguiculate, limb somewhat fiddle shaped, silky to the tooch, middle lobe elongated, acuminate, flat.

Ceylon. July. — Flowers greenish yellow, lip and points of sepals and petals tipped with pink. — Mrss. Walker.

36. DENDROBIUM GEMELLUM LO. n. 28. — Bot. Reg. XXX. 1844. Misc. 62. — Bot. Reg. XXVI. 1840. Misc. 192. — *Pedilonum biflorum* Blume p. 322.

Foliis membranaceis lanceolatis acuminatis, pedunculis oppositifoliis subbifloris, labello ovali acuto apice subcrispo, lamellis tribus serrulatus inconspicuis.

Sincapora, Cuming 158. Java. — A longstemmed grassy-leaved plant, with small pale yellowish green flowers, growing in pairs from short rigid twovalved truncated compressed spathes, placed opposite the leaves. In this respect it is like D. biflorum, of which it has all the habit, but the lip is perfectly entire and threelobed.

37. DENDROBIUM CANDIDUM Wall. MSS. — Bot. Reg. XXIV. 1838. Misc. 54. — Paxt. Fl. G. I. 43.

Caulibus erectis flexuosis teretibus, fol. ovato lanceolatis apice obliquis obtusis, pedunculis axillaribus erectis bifloris, sepalis patulis, lateralibus basi parum productis, pet. conformibus, labello ovato-lanceolato obtuso medio barbato supra basin calloso lateribus erectis cucullatis.

Duke of Devonshire sent flowers; — Mr. Paxton a sketch. Found by Mr. Gibson, his Gracens collector in India, at Nungclow, on the north side of the Khoosea Hills, growing on rocks, sand, and decayed trees. The flowers, which are pure white, are most exquisitely scented The habit is that of D. nobile; that is to say, erect, not pendulous, as is D. Pierardi and that race. The stems are about, high, and lose the principal part of their leaves before flowering.

38. DENDROBIUM NUTANS LO. n. 73.

39. DENDROBIUM FOLIOSUM Ad. Brogn. in Duperr. Voy. t. 41.

40. DENDROBIUM ALBOSANGUINEUM Lindl. — L. P. Fl. G. II. t. 57. p. 93.

Caulibus crassis erectis, floribus geminis nutantibus, bracteis herbaceis squamaeformibus, sepalis lineari-lanceolatis, lateralibus in mentum

breve obtusum productis, petalis oblongis incurvis pluries latioribus, labello obovato subrotundo plano retuso apiculato integerrimo.

Atran river, Moulmein. Lobb.

Huc: Lem. Jard. Fl. tab. 208. Van Houtte Fl. des Serres VII. 721.

Sect. V. *CHRYSANTHA.*

41. DENDROBIUM CHRYSANTHUM Wall. Cat. n. 2012. Bot. Reg. 1299. LO. 25. Huc: *Dendrobium Paxtoni* Lindl. — Bot. Reg. XXV. 1838. Misc. 56.

Caulibus teretibus sulcatis, foliis ovato-lanceolatis acuminatis apice hinc obsolete emarginatis, pedunculis bifloris, sepalis oblongis acutis lateralibus basi parum productis, petalis latioribus obovatis acutis serrulatis, labello unguiculato ovato concavo indiviso villoso margine multifido fimbriato.

Orange-yellow flowers with a deep brown spot in the middle of the lip. It is related to D. chrysanthum, from which it differs in having the petals serrated, and in the surface and margin of the label. It was found at Pundua, at the foot of the Khoseea hills of India by Mr. Joh Gibson, at whose request it was named after Mr. Paxton. April.

42. DENDROBIUM OCHREATUM Lindl. Wall. Cat. 7410. — Bot. Reg. XXI. sub 1756.

Caulibus brevibus e squamis membranaceis ventricosis erumpentibus, foliis ovato-lanceolatis acutis, vaginis ventricosis, floribus geminatis, sepalis petalisque majoribus lanceolatis acuminatis, labello rhomboideo ovato cucullato intus tomentoso.

Hab. in Chittagong, Wallich (hab. sp. s. e Museo Anglo Indic.). — Species vaginis laxis, alioquin facie D. Pierardi, primo intuitu distinguenda. Flores expansi fere 3 uncias lati, pallidi. Labellum purpureomaculatum; ungue intus supra medium calloso. — A beautiful plant.

Huc: *Dendrobium Cambridgeanum* Paxt. Mag. Bot. VI. 265. — Bot. Reg. XXVII. 1841. Misc. 171.

Caulibus pendulis medio incrassatis, foliis ovalibus acutissimis, pedunculis bifloris, petalis lanceolatis sepalis latioribus, labello cucullato rotundato indiviso supra piloso.

Only known from the Fig. in Paxt. It is said to be a native of the Khoseea hills of India, whence it was brought to Chatsworth by Mr. J. Gibson 1837; it was found on an elevation of 4000' attaching itself to rocks and trees. It is a beautiful species with large rich yellow flowers having a deep purple stain in the middle of the lip, but seems very near D. Paxtoni and chrysanthum.

Huc: B. Mag. 4450.

43. DENDROBIUM AUREUM Lindl. Orch. 78. Wight. Ic. V. (1851) 1646.

Stems round, pendulous, internodes short, leaves linear, oblong, obliquely emarginate at the point; flowers paired: sepals ovate, obtuse: petals undulated, obtuse, larger than the sepals; lip cucullate, limb ovate, obtuse, undulated, entire, pubescent within.

Ceylon, flowering in January.

Huc: *D. heterocarpum* Lindl. in B. M. 4708. Van Houtte Flore des Serres VIII 862. Lem. Jard. Fl. IV. tab. 386.

43b. DENDROBIUM AUREUM var. PALLIDUM B. Reg. 1839. XXV. 20.

Caulibus teretibus clavatis, internodiis brevibus, foliis lineari-oblongis apice obliquis emarginatis, pedunculis subbifloris aggregatis lateralibus, sepalis lineari-ovatis acuminatis obtusis, petalis latioribus ovatis acutis undulatis, labello ovali undulato obtusiusculo indiviso medio serrulato per axin pubescente.

Ceylon near Nuera Ellia. Macrae. Loddig. Varies with pale yellow and white flowers, the latter being represented. — Perigonium candidum labio basi luteo.

Huc: *Dendrobium rhombeum* Lindl. B. Reg. XXIX. 17.

Caulibus teretibus foliosis, foliis lanceolatis, racemis brevibus, 4 floris, sepalis ovalibus obtusis, petalis duplo latioribus ovatis, labello rhombeo undulato acuto medio pubescente, columna utrinque tuberculata pone basin cornu deflexo aucta, anthera pubescente.

Ab aureo differt labello non serrato, floribus minoribus. Flowers in short racemes instead of pairs. — In Manilla leg. Cuming. — Flor. apud Loddiges cat. 819. Aug. 42. — In basi columnae conspicitur antrum quoddam in quod dependet processus odontoideus.

44. DENDROBIUM OCHROLEUCUM Tejsm. et Binnendijk Naturk. Tijdsch. Nederl. Ind. Deel V. 1853.

Caulibus compressiusculis erectis, foliis lanceolatis inaequali obtusiusculis, basi semiamplexicaulibus membranaceis 8—10 nerviis, fl. geminatis supra axillaribus, labello erecto oblongo limbo retuso, phyllis perigonii externis oblongo ovatis acutis, internis lineari lanceolatis.

Aff. D. aureum. - Salak.

45. DENDROBIUM INTERMEDIUM Tejsm. et Binnendijk Naturk. Tijdsch. Ned. Ind. Deel V. 1853.

Caulibus foliosis compressiusculis, foliis linearilanceolatis oblique obtusiusculis, floribus geminatis foliis subopposítis, phyllis perigonii acutiusculis aequalibus, labello obovato retuso basi axi elevato.

Aff. D. salaccensi. — Salak.

46. DENDROBIUM SALACCENSE Lindl. Orch. 56. — Grastidium salaccense Blume Bjdr. 333.

47. DENDROBIUM RUGOSUM Lindl. Orch. 57. — Grastidium rugosum Blume Bijdr. 333.

b. Labellum trilobum.

a. Caulis laevis.

48. DENDROBIUM RUCKERI Lindl. — Bot. Reg. 1843. Misc. 38 et tab. 60.

Caulibus teretibus, foliis ovato-lanceolatis acuminatis planis, floribus gemellis, sepalis patulis obtusiusculis convexis margine reflexis, lateralibus subtriangularibus, labelli trilobi lobis rotundatis intermedio undulato axi elevata villosa.

Perigonii phylla extus albido flaveola, intus ochraceo-flava, labellum extus roseum, intus lobo medio flavo, lateribus intus albis margine flavis, medio aurantiacis, axi elevato villoso albo. — We presume this plant to be one of Mr. Cuming's discoveries in the Philippines, although no trace of it is to be found among his dried specimens. — It belongs to Pierardi with sanguinolentum, chrysanthum, Cambridgeanum, rugosum, salaccense, Paxtoni, aureum. — A Manilla (?) plant, which has lately flowered with Mr. Rucker. It is sweet-scented, handsome, and distinguished by its clear yellow nankin coloured flowers, the lip of which is a little stained with rose colour.

49. DENDROBIUM SANGUINOLENTUM Lindl. in Bot. Reg. 1842. XXVIII. Misc. 73. 1843. XXIX. 43. 6.

Caulibus teretibus pendulis, foliis ovato-lanceolatis, floribus gemellis, sepalis petalisque ovatis obtusiusculis patulis, labello trilobo glabro lacinia intermedia retusa nunc utrinque plicata; ungue concavo brevi appendice cornuformi pubescente retrorsa aucto.

Flores flavi, violascenti, purpureo et (medio in labello) rubro picti. — Mr. Nightingale misit ad ducem of Northumberland e Ceylonia. — Adest varietas quaedam ex Lindl. labello quidem diversa (fig. 2), quae violascenti purpureo non picta. Sed facie et omnino aequalis alii plantae. — Flowers as large as these of D. aggregatum of a

clear fawn colour, with the tips a deep rich violet. There is more over a scarlat spot in the middle of the lip.

51. DENDROBIUM AQUEUM Lindl. Bot. Reg. 1843. Misc. 6. Bot. Reg. 1842. tb. 54.

Foliis ovato-oblongis undulatis acuminatis, floribus patulis cornu brevi obtuso, sepalis petalisque ovatis, labelli trilobi pubescentis lacinia media ovata denticulata basi alte excavata lateralibus latioribus rotundatis margine anteriore serrulato.

Novb. 42. Loddiges imp. from Bombay. — Perigonium albidum basibus apicibusque phyllorum viride, labellum medio flavum. — The habit is that of D. Pierardi: the flowers are rather larger, and of a pale watery green colour. It is also a much stouter plant with wavy leaves.

Huc: Lem. Jard. Fl. tab. 262. — B. Mag. 4640.

Huc: *Dendrobium album* R. Wight. Ic. V. 1. (1851) 1645.

Erect, jointed, stems enlarging from the base to the apex, internodes much shorter than the leaves, leaves oblong, elliptic, acuminate, flowers axillary, paired, long peduncled, sepals ovate, acute, lateral ones falcate, petals obovato elliptic, obtuse, larger than the posterior sepal: lip 3 lobed, lateral lobes entire, obtuse, middle one cucullate, ovate acute, saccate, at the base ciliate.

Flowers white. — This is one of the handsomest of the genus I have yet met with; the large pure white flowers and dark foliage are very conspicuous. It seems to be rather rare, as I have only once obtained specimens. — Jyamally Hills. Sept. Rare.

Lindl. Paxt. Fl. p. 175. N. 446. Xyl. 228. — Scarcely distinct from D. aqueum, fig. B. R. 1843. t. 54: appearing to differ in nothing exept a more narrow middle lobe of the lip, more distinct fringes upon its edge and in absence of the green tinge which has been observed in D. aqueum.

52. DENDROBIUM CUNNINGHAMI Lindl. — Bot. Reg. XXI. 1835. sub 1756.

Caulibus gracilibus pendulis ramosis, vaginis foliorum corneis transversim corrugatis squamatis, foliis ovato-linearibus obtusiusculis, pedunculis oppositifoliis bifloris foliis multo brevioribus, sepalis ovatis acutis, petalis oblongis acutis latioribus, labelli trilobi lobo intermedio subrotundo undulato basi quinquelamellato, lateralibus nanis acutis.

Supra truncos Callist. ellipt. (A. C.) in insula sept. Novae Zeelandiae, juxta mare, incolis Raumanghe. R. Cunningham (hab. s. sp. comm. lel. A. Cunningh.). — This species is nearly allied to D. biflorum, of wich I had examined no specimen at the time the Gen. and Sp. Orch. was published.

Dendrobium biflorum Ach. Rich. Sert. Astrolabe t. 26. A. Rich. Fl. Nov. Zel. p. 167. t. 62. — Bot. Reg. YYY. 1844. Misc. 62. pag. 54.: — New Zeeland (North Isl.) 1768. Sir Joseph Banks; at Wangaroa, on trees, Pohutu Kana (Metrosidores tomentosa) A Rich. 1834. — R. Cunningham (Middle Island). Shores of Astrolabe Harbour on trees 1827. D'Urville. — All. to D. biflorum Sw. of the Soc. Islands. A. Cunningh Bot. Mag. Comp. II. p. 377. — Hook. fil. nov. Zeel.: „troughout the Island, as for south as Stewart's Islands. Banks and Solander."

53. DENDROBIUM LANCIFOLIUM Ach. Rich. Sert. Astrol. tab. 8. — Lindl. B. Reg. XXX. Misc. 62:

Caule erecto ramoso folioso tereti glabro, fol. anguste lanceolato-linearibus acutis, florib. purpurascentibus saepius quaternis pedicellatis subspicatis, sepalis lanceolatis acutis, labelli unguiculati trilobi lobo medio latiore ovato margine subcrispo, lateralibus obtusis subcrispis planis.

A. Rich. l. c. II. p. 20. D. caule erecto ramoso, folioso, tereti, glabro; foliis alternis lanceolato-linearibus acutis, striatis; floribus purpurascentibus saepius quaternis pedicellatis subspicatis; laciniis exterioribus lanceolato-acutis, labello lato, obsolete trilobo. — Crescit in insula Bourou.

54. DENDROBIUM LUZONENSE Lindl. — Bot. Reg. XXX. 1844. Misc. 62. p. 54.

Foliis distichis anguste lanceolatis apice oblique emarginatis, pedunculis brevibus bifloris, labello spathulato obtusissimo laciniis lateralibus obsoletis denticulatis.

Luzone. — A small flowered plant with very closely set distichous leaves.

55. DENDROBIUM TRIDENTIFERUM Lindl. in Voy. of the Feejee Islands in Hook. Lond. Journ. of Bot. Vol. II. 43. p. 237.

Foliis oblongo-lanceolatis oblique emarginatis, gemmis paleaceis, floribus geminis, sepalis lateralibus ovatis carnosis obliquis, petalis lanceolato-oblongis acutis membranaceis, labello carnoso trifido, basi tuberculo carnoso lineâque utrinque elevata aucto, lob. acutis, lateralibus antrorsum curvis, intermedio ovato, cornu brevi obtuso.

A broad leaved species looking like D. biflorum, to which it is nearly allied. It has fleshy flowers as large as those of D. Pierardi, but quite different in structure. — New Guinea, Hinds? (videtur! sed non dicitur a L.)

56. DENDROBIUM METACHILINUM Rchb. fil in Bonpl. III. 222.

Caule carnoso, foliis oblongoligulatis pergameneocarnosis apice inaequalibus, flore illi Ddb. calcarati Lindl. haud absimili, labello ligulatolineari marginibus infra cum pede gynostemii connatis, antice trilobo, lobis lateralibus minutis dentiformibus supra basin lobi medii ovato reniformis positis, lobo medio carnoso papuloso marginibus lobulato.

Caules foliis dejectis quasi serratonodosi, calamum columbinum crassi; quadripollicares. Folia usque sesquipollicaria, tertiam pollicis lata. Flores illis D. calcarati aequales; calcar tamen ovario pedicellato duplo brevius. Labelli lobus medius infra plano triangulo acuto antrorso nudus, limbatus, ceterum papulosus. Gynostemium apice breviter tricorne. 2037 Cuming. Phil.

57. DENDROBIUM MAC CARTHIAE Hook. B. Mag. 4886. 1855.

Caulibus pendulis flagelliformibus teretibus striatis versus apicem foliosis, nodis parce tumidis, racemis axillaribus 4—5 floris, floribus magnis dilute purpureis, sepalis lanceolatis acutis petala multo latiora ovato lanceolata longitudine fere aequantibus, labello subtrilobato vel sutrapeziformi apice rotundato retuso, foliis lanceolatis.

Ceylon, sparingly in forests about Ratuapoora and towards Galle „Wissah mel" (Rainymonth flowers „May flower". To Mrs. Mac Carthy, lady of Hon. C. T. Mac Carthy Esq. Col. Secret. of the island.)

58. DENDROBIUM SPHEGIDIGLOSSUM Rchb. fil. Bonplandia II. p. 88.

Aff. D. Scopae: floribus racemosis, labello ecarinato lanceolato flabellato apice trilobo, lobo medio calloso, lateralibus ligulatis abbreviatis, omnibus rite in subulas solutis.

Caulis teretiusculus, sulcatus, foliorum vaginae arctae, racemi laterales pauciflori, basi arcte vaginati, bracteae ovatae acutae cucullatae, ovaria pedicellata dimidio aequantes, flores candidi, sepala oblonga acuta medio carinata, lateralia in calcar clavatum extensa, tepala oblongo cuneata acuta microscopice denticulata, labellum a basi triangula canaliculata antice trilobum, lobi laterales anguste trianguli, medius lobus latior ligulatus, in crines laxos crispulos solutus, lobi laterales margine ciliato crispuli, additis quibusdam crinibus in ipsa labelli lamina, discus vernixius, lobi medii apex callosus, asperulus, incrassatus. Gynostemium apice utrinque unicorne, basi foveatum, fovea apice linearis, dein subito dilatata. Blüthen weiss, mit Stich in's Rosafarbige: so gross wie die des D. crepidatum, aber mehr dünnhäutig. Von Herrn Consul Schiller aus Ostindien eingeführt.

Huc referendum, antiquius quidem, sed false descriptum:

DENDROBIUM STUPOSUM Lindl. — Lindl. B. Reg. 1838. XXIV. Misc. 94.

Caule erecto tereti, foliis lineari-oblongis oblique emarginatis, pedunculis bifloris, bracteis obtusis cucullatis, sepalis petalisque erectis, lateralibus carinatis, labello oblongo cucullato obtuso sub apice calloso stuposo.

A native of India, whence it was obtained by his Grace the duke of Devonshire, also from Loddiges. An erect spec. with habit and general appearance of D. candidum, the flowers are of the same white colour, and but little smaller: the labellum, however has a deep orange callus below its point, where it is thickly covered with a coarse towlike hairiness.

59. DENDROBIUM REVOLUTUM Lindl. — Bot. Reg. XXVI. 1840. Misc. 110. — Paxt. Fl. G. Xyl. 42.

Caulibus obtuse ancipitibus, foliis ovato-oblongis apice obliquis emarginatis basi subcarinatis, floribus solitariis oppositifoliis, sepalis petalisque acutissimis revolutis, labello carnoso convexo obtuso subtrilobo aut rhombeo per medium exarato (s. lamellis duabus inflexis parallelis instructo) lineis tribus discoloribus.

Sincapore. Cuming. — Flowers straw-coloured, about the size of these of D. Pierardi, but their lip is fleshy, convex, almost lozenge-shaped, and marked with 3 brown lines. Not pretty.

60. DENDROBIUM EXCISUM Lindl. — Bot. Reg. XXVII. 1841. Misc. 165.

Foliis lineari-oblongis oblique retusis, floribus (solitariis?) oppositifoliis basi squamatis, sepalis petalisque acuminatis, labello oblongo acuto carnoso basi utrinqne exciso: disco late glanduloso, cornu pedicello fere duplo breviore.

A small species with the habit of Dendrobium pulchellum, but with white inconspicuous flowers. It is anative of Sincapore, whence it was brought by Cuming. Loddig. Sw. (331.) Nearest aff. Dendr. revolut. and calcaratum.

61. DENDROBIUM BILOBUM Lindl. sp. n. — Lindl. in Voy. of the Feejee Islands by Bentham in Hook. Lond. Journ. of Bot. Vol. II. 43. p. 236.

Foliis linearibus obtusis apice subaequalibus bilobis, floribus membranaceis minutis (solitariis?), sepalis obtusis, petalis duplo minoribus apiculatis, labello libero elongato obovato apice carnoso trilobo: lacinia media verrucosa, cornu elongato obtuso.

A small inconspic. spec. with the appearance of Is ochilus linearis New Guinea Mr. Hinds.

62. DENDROBIUM CRUMENATUM Lindl. — B. Reg. XXV. 1839. tab. 22.

Caulibus caespitosis erectis basi incrassatis teretibus, foliis ovato-oblongis obtusis emarginatis, racemo terminali (3—5) multifloro, sepalis petalisque ovatis acuminatis subundulatis conformibus, labello cucullato-trilobo: lobis lateralibus truncatis, intermedio ovato acuto, disco lamellato.

Angrecum crumenatum Rumph. herb. amb. VI. 105. t. 47. f. 2.
Onychium crumenatum Blume Bijdr. 326.
Dendrobium crumenatum Sw. W. sp. pl. n. 20. Hort. Trans. VII. 70.

Dr. Blume found it in Java, near Batavia and on the cost of the little island of Nusa Kambanga; and the late Sir Stamford Raffles met with it in Sumatra. Rumphius gives no locality for its referring from the body of his work to a description in the appendix; where however nothing is to be found except a reference back to the body of the work; it is doubtless however an inhabitant of Amboyne. The specimen now figured was sent by Mr. Nightingale from Ceylon to his Grace the duke of Northumberland, in whose coll. at Syon it flowered Aug. 37. — According Blume it varies with white and pink flowers, with leaves more or less oblong and coriaceous. It is one of the easiest of the genus to manage. Why it is called crumenatum (literally purse-shaped) I am unable to state. Rumphius with whom the name originated, gives no explanation; but in one place he calls it A. crumenatum, and in another Angrecum angustis crumenis. — Perigonium album, labelli cristulis flavis.

Huc: Bot. Mag. 4013.

63. DENDROBIUM BIFLORUM Sw. — Bot. Reg. XXI. 1836. t. 7. sub 1756.

Caule pendulo gracili tereti, foliis lineari-lanceolatis acuminatis planis, pedunculis bifloris lateralibus e paleis corneis erumpentibus, sepalis petalisque acuminatissimis, labello rhomboideo medio bilamellato trilobo lobis lateralibus acutis nanis, intermedio deltoideo acuminato margine fimbriato.

Otahaiti, Matthews. — Bot. Reg. XXX. 1844. — Epidd. biflorum Forst: Prodr. n. 318. Dendrobium biflorum Sw. act Holm. 1800 p. 246. W. n. 17. n. 18. — Society Island. — Leaves very narrow and grassy. Flowers very small, with setaceous points.

b. Caulis hispidus.

64. DENDROBIUM LONGICORNU Lindl. (Wall. Cat. 1997.) Orch. 26. Bot. Reg. 1315. Gard. Chronicle 1848. 785.

65. DENDROBIUM JERDONIANUM R. Wight Ic. V. I. 1851. tb. 1644. — Erect, stems jointed, thickening upwards, internodes about the length of the leaves, leaves ovato lanceolate, succulent, forked at the apex: raceme axillary, short, 2—3 flowered: bracts minute: flowers long pedicelled, calcarate, lateral sepals much produced at the base, posterior one and petals equal, all linear lanceolate, acute, lip sinuately undulated on the margin, obovate, forming with the long base of the column a short conical spur. Flower deep orange colour, lip conforming, or a little redder. — Coorg Jungles. Jerdon. Jyamally Hills. Aug. Sept. (Specimina paulo diversa.)

Huc: *Dendrobium villosulum* Wall. in Paxt. Fl. G. II. p. 82. N. 348. Xyl. 176. — Orange coloured flowers, rough stems. Imported from Tillicherry. Near Wallichs D. angulatum.

Caule erecto nigro villoso, foliis linearibus acute et oblique bilobis, pedunculis bifloris, sepalis petalisque acuminatis recurvis obtusis, lateralibus in mentum breve cornutum connatis, labello lineari-lanceolato trilobo 3 lamellato lobis lateralibus nanis.

66. DENDROBIUM LOBBII Teijsm. et Binnendijk in Naturk. Tijdsch. Nederl. Ind. V. 1853.

Caulibus foliosis teretibus erectis rufopilosis, foliis bifariis sessilibus lanceolatis apice oblique-emarginatis acutiusculis, subtus lepidotis, floribus solitariis foliis suboppositis pendulis, phyllis perigonii externi linearibus acutis, internis minoribus angustioribus recurvatis labello erecto trilobo venis tribus elevatis lobo medio emarginato dentato, lobis lateralibus acutis.

Th. Lobb ex Singapore misit.

67. DENDROBIUM CONOSTALIX Rchb. fil. MSS. Huc: *Dendrobium calcaratum* Lindl. — Bot. Reg. XXVI. 1840 Misc. 219.

Caulibus nigro-pubescentibus, foliis linearibus oblique bilobis, floribus resupinatis, sepalis ovatis, lateralibus revolutis basi in cornu conicum pedicelli longitudine productis, petalis lineari-lanceolatis, labelli linearis carnosi laevis trilobi lacinia intermedia subrotunda marginibus incurvis ungue cum columnae pede in calcar verum connato.

A slender inconspicuous species allied to D. revolutum and biflorum, with green flowers, growing in pairs opposite the leaves. It was found at Sincapore, by Mr. Cuming. and flow. with Mss. Loddiges (n. 158).

bb. *Stachyobium* Lindl.: inflorescentia racemosa.

† Labellum indivisum planum.

* Aurea.

68. DENDROBIUM FLAVESCENS Lindl. Orch. 48. — *Onychium* — Blume Bijd. p. 325.

69. DENDROBIUM SULCATUM Lindl. — Bot. Reg. XXIV. 1838. 65.

Caule clavato sulcato subflexuoso compresso, foliis oblongis acutis 3 nerviis, pedunculis lateralibus trifloris, bracteis minimis acutis appressis, petalis oblongis obtusis glabris sepalis subaequalibus, labello obcordato hirsuto ungue canaliculato sulcato.

India. Gibson: Devonshire. Nearly related to D. Griffithianum from which it differs in its three flowered peduncles and in the form of the lip. — Perigonium luteum, labello rubro picto.

70. DENDROBIUM POLYANTHUM Wall. Cat. n. 2009. LO. n. 31. — Bot. Reg. XXX. 1844 Misc. 62. p. 57.

Capsulis fusiformis apteris.

Moelmeyn. — This plant is evidently very near D. moschatum. It however appears to have smaller flowers with far narrower segments, and as far as can be ascertained from dried specimens, they are nearly colourless, except the lip, which is yellow.

71. DENDROBIUM GIBSONI Lindl. in Paxt. Fl. G. II. p. 138. Xyl. 204.

Foliis acuminatis, racemis nutantibus pendulisque multifloris, elongatis, bracteis minutis ovatis obtusis, floribus sucarnosis, sepalis subrotundis basi in cornu brevi connatis, petalis latioribus integerrimis, labello cochleato cucullato obtuso villoso fimbriato.

Differs from D. clavatum by obsolete bracts and much smaller flowers. Nearly allied to fimbriatum. Like D. fimbriatum it bears its flowers in long nodding racemes; their colour is yellow, and they are stained on the inside with a purple blotch in the same manner as those of the plant figured in the Bot. Mag. under the name of D. fimbriatum oculatum. But the flowers are smaller, between fleshy and leathery in texture, much blunter in the bud, in consequence of the greater roundnes of all the parts, and the petals are entirely destitute of the fringes which accompany those of D. fimbriatum. Tenasserim Griffith.

72. DENDROBIUM FIMBRIATUM Hook. Ex. fl. 71. Wall. Cat. 2011. LO. 38. — Bot. Mag. III. Ser. I. Vol. 4160:

Caulibus erectis, fertilibus plerumque aphyllis, foliis lanceolatis striatis, racemis plurifloris, sepalis oblongis patentissimis integerrimis, petalis majoribus undulatis ciliato denticulatis, labello indiviso cucullato fimbriato lacerato.

Var. b. *oculatum:* labello fauce macula lata atrosanguinea. Tb. nostr. 4260.

Huc Paxt. Fl. G. III. 51: *Dendrobium fimbriatum* Hook.

Caulibus teretibus foliosis, foliis erecto lanceolatis, racemis lateralibus laxis multifloris, bracteis herbaceis minutis, sepalis oblongis patentissimis, petalis majoribus denticulatis, labello indiviso rotundato cucullato villoso fimbriato, fimbriis laceris.

Var. b. *oculatum:* floribus majoribus, labello medio atropurpureo.

Some times known under the erroneous name of Paxtoni, which is a twoflowered species. — Wild specimens of the dark eyed: Mergui Griffith. The whole coloured: Nepal. — From D. clavatum it is known by its long membranous bracts, by its smaller flowers, D. Gibsoni has never open flowers and no fringes on petals.

Huc: *Dendrobium Paxtoni* Van Houtte Fl. des Serres VII. 725 ad Paxt. Mag. VI. 169. — Huc Lem. Jard. Fl. III. tb. 15. 314.

73. DENDROBIUM CLAVATUM Lindl. in Paxt Fl. G. II. 104. Xyl. 189.

Caulibus teretibus pendulis, foliis —, racemis lateralibus laxis quinquefloris flexuosis basi squamatis, bracteis membranaceis oblongis cucullatis internodiis aequalibus, sepalis lineari-oblongis, petalis obovato oblongis rotundatis subundulatis, labello transverso leviter trilobo pubescente margine recto ciliato.

Affinity witch D. fimbriatum and moschatum, to the latter of which we were formerly led by bad specimens to refer it as a synonyme. From D. fimbriatum it differs in having large membranous bracts and no deep fringes to the lip. In its bracts it agrees with D. moschatum and in the flowers appearing from within hard scales, but the lip has not the inflexed edge and slipper form of that species, and the racemes are much shorter.

** Non aurea.

1. 1. Mentum triangulum.

74. DENDROBIUM DALHOUSIANUM Paxt. Mag. of bot. XI. t. 145. — Lindl. Bot. Reg. 1846. t. 16.

Caulibus teretibus subfusiformibus striatis; foliis ovato lanceolatis obtusis, racemis horizontalibus 5—7 floris; bracteis squamaeformibus, sepalis ovatis, petalis conformibus multo majoribus, labello indiviso oblongo medio constricto, basi foveato, parte superiore obtuso glanduloso villoso lateribus erosis glabris, lamellis 3 per medium brevibus laciniisque utrinque uniseriatis inflexis; cornu brevi obtuso.

Ind. or. — Van Houtte Fl. S. VII. 698.

75. DENBROBIUM FORMOSUM Lindl. — B. Reg. XXV. 1839. 64.

Caulibus teretibus pendulis pilosis, foliis distichis ovalis apice oblique emarginatis obtusis, racemo brevi terminali 4—5 floro, bracteis brevibus ovalis, (floribus maximis), sepalis oblongis acutis: lateralibus basi longe productis, petalis duplo latioribus acutis, labello obovato dilatato retuso cum basi columnae in calcar obtusum connato. Lindl. in Wall. Pl. As. Rar. p. 34. t. 39.

Dendrobium formosum Roxb. Fl. Ind. III. 485. Wall. Cat. 1998.

Roxburgh found it on trees in the forests of Sylhet, and in the Garrow mountains fl. April, May. — Wallich gathered it on the mountains of Nepal and Sylhet, also in the province of Martaban near Moulmein and in Tavoy on the Tenasserim coast flowering and fruiting in both the dry and rainy seasons. Mr. Griffith also met with it on trees in damp places in the neighbourhood of Moulmein. — Perigonium candidum labello medio luteo.

Porro: Lindl. Bot. Reg. XXIV. 1838. Misc. 86. — This noble plant, whose large ivory-white flowers are unrivalled for beauty in even the rich Flore of India, was sent from Chatsworth on the 12. May: having been imported for the Duke of Devonshire by Mr. Gibson, his Graces collector in the East Indies. The flowers grow at the end of a leafy stem, and are between 3—4''' is expansion with every part of the purest and most transparent white, except one delicate lozenge shaped, buff-coloured blotch in the centre of the lip. Neither the form, nor the colour of this is correctly given in Dr. Wallich's work above quoted.

76. DENDROBIUM MUTABILE Lindl. Orch. 50. Huc: *Onychium mutabile* Bl. Bjdr. 324. — *Onychium rigidum* Bl. p. 324. — *Dendrobium rigidum* Lindl. Orch. 51.

Huc: *Dendrobium* (Onychium) *triadenium* Lindl. Bot. Reg. 1846. sub t. 64. — Bot. Reg. 1847. 1.

Radicibus villosis, caulibus elongatis teretibus ramosis basi fusiformibus, foliis ovato-oblongis obtusis, panicula brevi terminali confertiflora, racemosa, sepalis ovatis acutis, petalis labelloque oblongis undulatis rotundatis emarginatis, hoc glabro utrinque unidentato medio tuberculo tricrenato aucto, mento brevi obtuso, columna apice dentata, stigmate villoso.

Flores albi, crena aurantiaca, striolae roseae. — East Indies.

77. DENDROBIUM JAPONICUM Lindl. Orch. 89. — *Onychium japonicum* Bl. Bijdr. 328.

78. DENDROBIUM NUDUM Lindl. Orch. 85. — *Onychium nudum* Bl. Bijdr. 325.

79. DENDROBIUM HERBACEUM Lindl. — Bot. Reg. XXVI. 1840. Misc. 153.

Caulibus ramosis teretibus glabris, foliis lineari-lanceolatis acuminatis apice oblique bilobis, racemo paucifloro terminali, sepalis lateralibus basi paulo productis, dorsali petalisque linearibus, labello lanceolato integerrimo nudo, clinandrio biauri.

A small branching plant with leaves from 2 — 3" long, and inconspicuous green flowers. Imp. from East Indies by Loddiges.

80. DENDROBIUM CUMULATUM Lindl. Gardn. Chronicle 1855. p. 756.

D. cumulatum (Stachyobium) racemis densis lateralibus, petalis obovatis obtusis sepalis multo majoribus, mento sepalis aequali angusto incurvo acutiusculo, labelli glabri ungue lineari pone basin unidentato lamina oblonga obtusa.

A most beautful addition to our collections. We first received a specimen in September last from Mr. Charles Junkermann, who found it growing in the garden of Mr F. Coventry, of Shirley, near Southampton, and who describes the plant as having a dark stem covered here and there with Vanilla-scented blossoms. Since that time we have also had it from Mr. C. B. Warner. It appears to have been bought at one of Mr. Skinner's sales; but its real history is unknown to us. The flowers are nearly 2 inches long, with the delicate pink colour and transparent texture for wich Dendrobium transparens is remarkable. They grow in lateral compact clusters, five or six together, in the same manner as in D. aduncum. The depth of colour in them varies; Mr. Warner's specimens having been very much darker than those from Mr. Coventry, and moreover having the delicate lip itself freckled with rosecolour. The leaves have not been seen by us. The species must stand next D. aduncum, from which it differs in its large flowers, incurved acute chin, and perfectly hairless obtuse lip. There is more than one nearly allied unpublished species in our possession from Java, whence this perhaps has come.

81. DENDROBIUM ADUNCUM Wall. — Bot. Reg. XXVIII. 1842. Misc. 62.

Caulibus pendulis, foliis lineari-lanceolatis acutis integris, floribus ternis patentibus, sepalis petalisque ovatis obtusis lateralibus duplo latioribus, cornu rotundato, labello unguiculato ovato concavo apiculato columnae arcte appresso intus villoso glabro, columna apice bialata sub stigmate villosa, anthera glandulosa.

Aff. to D. Pierardi, received by Loddiges, from Dr. Wallich. The flowers are almost transparent, and of a most delicate pink, they are nearly as large as in D. moschatum.

2. 2. Mentum perulaceum elongatum.

82. DENDROCIUM THYRSODES Rchb. fil. Huc: *Dendrobium Kuhlii* Lindl. — Bot. Reg. 1847. 47.

„Foliis ovali-oblongis acutis subseptemnerviis apice inaequalibus, racemis brevibus plurifloris, sepalis ovatis patulis petalis latioribus, labelli limbo lineari spathulato acuto imberbi, calcare crasso ovarii fere longitudine."

Java. Lobb.

83. DENDROBIUM RAMOSUM LO. n. 34. — Flowers have a long and conspicuous spur.

Obs. „*Dendrobium bursigerum* a new Dendrob. near secundum Gard Chr. 1852. 8.

84. DENDROBIUM VIRIDIROSEUM Rcb. fil. in Bonpl. III. 228.

Aff. D. secundo Lindl. et Kuhlii Lindl.: labello ligulato acuto canaliformi per medium septo transvero membranaceo diviso.

Racemi rhachis crassa brevis; bracteae triangulae pro genere magnae scariosulae. Flores rosei apicibus perigonii viridibus: labellum album roseo striolatum. Perula cylindracea ampla antice usque supra basin fissa. Pollinia viridia. Aus Java? eingeführt von Hrn. Consul Schiller, cultivirt von Hrn. Stange. Amboyna?

85. DENDROBIUM SECUNDUM Lindl. Bot. Reg. 1291. — Bot. Reg. XXVII. 1841. Misc. 169. — Flowered with Mr. Knight of the King's Road. Lateral sepals and base of the lip are so united in a spur, that their separate nature is entirely concealed towards the point of the spur. The rostellum is a deep two-lobed lip curved down over the stigmatic surface. The pollenmasses are in two pairs, and deep purple and which is extremely curious, they lie upon a loose hard transverse gland, which seems to replace the gland and caudicula of Vandeae, and which projects beyond the anterior edge of the anther resting upon the twolobed rostellum. The anther-bed itself is deeply excavated, and 3-lobed, the anther adhering to the back lobe, which is the narrowest.

Huc: B. M. 4352. — De Vriese Illustr. t. 6.

86. DENDROBIUM EROSUM Lindl. Orch. 52.

87. DENDROBIUM HYMENOPHYLLUM Lindl. Orch. 53.

88. DENDROBIUM HASSELTII Lindl. Orch. 59.

89. DENDROBIUM CALCARATUM A. Rich. Sert. Astrol. t. 7. Voyage. Botanique II. p. 18. D. caule ramoso, quasi articulato, glaberrimo, bipedali, florifero, aphyllo; foliis lineari-lanceolatis acutis glaberrimis, basi vaginatis, caducis; floribus spicato-corymbosis, spica multiflora; bracteis linearibus acutis glabris: sepalis lateralibus basi in pseudocalcar recurvum, fissum productis, labello lineari-subspathulato, plano, acuto. — Crescit in insula Vanikoro.

†† Labellum indivisum calceolare.

90. DENDROBIUM MOSCHATUM Wall. Lindl. Orch. 82. — Bot. Reg. XXX. Misc. 82. p. 57.
Dendrobium cupreum Herbert in Bot. Reg. 1779.
Dendrobium clavatum Wall. Cat. n. 2004.

Caulibus teretibus pendulis, foliis lineari-lanceolatis oblongisque, racemis lateralibus laxis 5—6 floris, bracteis pedicellis 3 plo brevioribus, sepalis patentissimis petalisque oblongis obtusis latioribus venosis reticulatis, labello unguiculato calceolari obtusissimo margine abrupte inflexo pubescente.

Burma, Pegu, Ava, Sylhet. — This beautiful plant with large nankin coloured flowers stained and veined with crimson, is readily known by its labellum, whose edge is turned inwards and delicately fringed with hairs. — Its odour is compared by some to musk, by others to rhubarb, and by others to wood-roof.

Huc: *D. Calceolaria* Hook. Ex. 184. — B. M. 3837.

††† Labellum trilobum

* Tepala extensa, vulgo sepalis longiora. (Folia valde coriacea.)

91. DENDROBIUM MIRBELIANUM Gaudich. Voy. t. 38.

Foliis ovato-oblongis obtusis, racemis ovatis longe pedunculatis, sepalis ovato lanceolatis acutis erectis, petalis spathulatis unguiculatis obtusis longioribus, labelli 3 lobi ovato-lanceolati subsessilis lobis lateralibus rotundatis intermedio lanceolato undulato acuto, lineis 3 elevatis, lateralibus versus basin duplicibus.

New Guinea by Hinds! — Gaudichaud's fig. is not a good one. The racemes, including their peduncle, are more than a foot long. The pet. 1⅙" long.

Lindl. in „Vegetat. of the Feejee Islands by Bentham in Hook. Lond. Journ of Bot. Vol. II. 1843. p. 235. — This plant, but ill figured by Gaudichaud's artist, belongs to a very curious and beautiful section of Dendrobium, of which I have several species, including D. undulatum R. Br., D. macranthum Ach. Rich. and probably Onychium affine Decaisne. The sectional name expresses one of its chief peculiarities, namely, the petals being extended giving the flowers an appearance still more insect-like than is customary in this order. Besides that circumstance the lip is united to the foot

of the column into a pouch or horn, and the anther-bed has a horn on its back. They all have distichous leaves and a rigid raceme of strong flowers. At one time I thought, they might form a genus, but I believe, it is better to regard them as a mere section of Dendrobium.

92. DENDROBIUM VERATRIFOLIUM Lindl. n. sp. — Lindl. in „Veg. of the Feejee Islands by Bentham in Hook. Lond. Journ. of Bot. Vol. II. 1843. p. 236.

Foliis oblongis obtusis amplexicaulibus 9—11 nerviis, racemo terminali elongato multifloro, sepalis undulatis acutis, petalis spathulatis obtusis planis vix duplo longioribus, labello oblongo membranaceo venis 3 elevatis per axin duabusque minoribus lateralibus, lobis lateralibus nanis obtusis intermedio oblongo undulato.

A most beautiful plant, with racemes a foot and ½ long, leaded with flowers, whose spatule shaped petals are an inch and more in length. New Guinea Mr. Hinds.

Bot. Reg. XXIX. Not. sub 28: New Guinea Hinds. — Flores albi, petala 1" longa. — D. Mirbeliani inflorescentia compactior.

93. DENDROBIUM MACRANTHUM A. Rich. Sert. Astrol. p. 15. t. 6. — Bot. Reg. 43. XXIX. sub 28. Not.

Foliis ellipticis apice obliquo subbilobis, racemo longipedunculato versus apicem monophyllo, sepalis ovato-lanceolatis, petalis paulo longioribus unguiculatis lanceolatis acutis, labello lanceolato 3 lobo per axin 3 carinato lacinia intermedia acuminata lateralibus nanis rotundatis.

Island of Vanikoro. — Caulis bipedalis et altior. Folia 3—4". Racemi 1'. Flores 3" in diam. Prope Loddiges' D. veratrifolium, sed habet petala valde breviora, labellum acutissimum.

Rac: Voyage de l'Astrolob. Botanique II. p. 15: D. caule glabro, bipedali, tereti, articulato, subincrassato-bulbiformi glabro; foliis alternis vaginantibus, ellipticis, apice obliquo subbilobis, glaberrimis; floribus maximis pedunculatis laxe spicatis; calycis laciniis exterioribus aequalibus lanceolatis; labello lanceolato, versus medium coarctato; parte superiore acuta, inferiore latiore, secundum longitudinem facie interna subcristato. Nob. — Crescit in insula Vanikoro.

Descriptio.

Caulis parasiticus teres bipedalis et ultra, ramosus glaber, basi subincrassato-bulbiformis, cicatricibus foliorum elapsorum annulatus et vaginis persistentibus circumdatus. — Folia alterna vaginantia, elliptica, apice subobliquo acutiusculo, glaberrima, subcarnosa, rigidula, striata, 3—4 uncias longa, unam et semis lata, cum vaginis articulata et facillime transversali sectione secedentia. — Flores maximi, longissime pedicellati, spicam longam axillarem, lateralem, subpedalem efformantia. Flores 7—8—9 resupinati, basi bracteola brevi ovali-acuta stipati: pedicellis teretibus biuncialibus; pedunculo communi tereti glabro medietate superiore florifera, inferiore nudo, et vaginulis tribus truncatis circumdato. — Calycis laciniae subpatulae; tres exteriores aequales lanceolatae, acutae, venoso-reticulatae; duae inferiores, basi latiores truncatae, inter se, mediante processu baseos anticae gynostemii, connatae, oblique productae, et quasi calcar aemulantes: duae interiores laterales ejusdem longitudinis oblongo-spathulatae acutae, venoso-reticulatae. Labellum, longitudine laciniarum, circiter e media processus parte enatum, lanceolatum acutissimum erectum, in duas partes divisum; superior ovali-lanceolata, acutissima, late venoso-reticulata, ab inferiore sinu lato obtuse separata; inferior major quasi obcordata, in media facie superiore lineis tribus longitudinalibus prominentibus et subcristaeformibus notata (hae lineae continuatae cum processu gynostemii videntur), lateraliter oblique et dense venosae. — Gynostemium breve, postice convexum, antice concavum et lateribus acutum; lateribus in puncto junctionis laciniarum externarum continuis et processum concavum, e quo nascitur labellum, efformantibus. Stigma supremam anticae faciei gynostemii partem occupans, madidum. — Anthera terminalis operculiformis. Oper-

culo superius convexo, inferius concavo, biloculari. Massae pollinis.... — Ovarium oblongum basi cum pedicello continuum, subcontortum.

94. DENDROBIUM ANTENNATUM Lindl. — Lindl. in „Veg. of the Feejee Islands by Bentham, Hook. Lond. Journ. of Bot. Vol. II. 1843. p. 236.

Foliis lanceolatis carnosis oblique emarginatis racemo oppositifolio brevioribus, sepalis acuminatis, petalis linearibus duplo longioribus reflexis, labello trilobo, venis 5 elevatis rectis per axin, lobo medio ovato acuto plano 3-costato.

The horn like petals of this curious plant are 2 inches long, and scarcely ½ a line wide. The leaves are succulent, brittle, and veinless, when fresh. New Guinea, Mr. Hinds.

95. DENDROBIUM TAURINUM Lindl. — Bot. Reg. 43. XXIX. 28.

Foliis oblongis emarginatis, racemo oblongo, sepalis ovatis obtusiusculis, petalis linearibus contortis duplo majoribus, labello oblongo apice crispo per axin lineis 3 elevatis intermedia apice flexuosa aucto.

Manilla. Cuming mis. ad Loddiges. 5' hight. Flowered at Hackney 43/8. Petala et labellum rubella, sepala et columna et calcar alba.

96. DENDROBIUM UNDULATUM R. Br. Prodr. 332. L. n. 62. — Bot. Reg. 43. XXIX. Note sub 29.

Foliis ovato-oblongis emarginatis, racemis longissimis, sepalis petalisque undulatis, labelli trilobi lobis acutis intermedio lanceolato, lineis 5 elevatis intermedia apice flexuosa.

A tropical New Holl. species, with singular dingy yellow-brown flowers, of little beauty. It has also been found in Java.

Hook. Bot. J. III. p. 254. 1841. „and doubling a bluff rocks point, covered with D. undulatum and a few Filices." — Port Bowen Austral. All. Cunningh.

Huc: *Dendrobium discolor* Lindl. — Bot. Reg. XXVII. 1841. Misc. 50.

Caulibus erectis fusiformibus, foliis oblongis obtuse emarginatis distichis, racemo terminali multifloro, sepalis petalisque lineari-oblongis, petalis crispis, labelli crenulati lobis lateralibus acutis intermedio lanceolato acuto lamellis 5 undulatis.

Although obt. by Msr. Lodd. from the Bot. Gard. at Buitenzorg, I cannot recognize this species among those mentioned by Dr. Blume. It has a most singular appearance with stout erect stems, 4' high, swollen in the middle, and terminal racemes of about 16 dingy yellowish brown flowers, as much curled and wavy as those of a Gloriosa. The lip has the same dull dirty colour, except along the middle, where it is decorated with fine deep wavy plates of a brigh violet. It is of the same sect. as the sweetscented Dd. crumenatum, now so rare in our garden, if it exists at all.

Bot. Reg. XXVII. 1841. 52. = undulatum Brown. plant. Novae Holland. falso citatur Dendrob. discolor B. Reg. 1841. 38. — Bot. Reg. XXVIII. 1842. Misc. 6.

97? DENDROBIUM AFFINE (*Onychium affine* Descaisne herb. timor. 37). — Lindl. Bot. Reg. 43. XXIX. Not. sub. 28.

„Foliis lineari-oblongis acutiusculis coriaceis, pedunculo foliis triplo longiore oppositifolio? laxifloro, floribus spicatis; perianthio erecto, segmentis exterioribus lineari-lanceolatis acutis, interioribus subobovatis rotundatis mucronulatis, labelli unguiculati lobis 3, medio lineari-lanceolato, lateralibus subrotundis."

As Mr. Decaisne ccompares this with D. Mirbelianum, it probably belongs to the present section, nothwithstanding that he conjectured the stem to be bulbous. Petals are said to be obovate and mucrenate. With acute linear-lanceolate leaves.

** Tepala non extensa. (Folia plurium papyracea).

98. DENDROBIUM HEYNEANUM LO. 90. — Lindl. Bot. Reg. XXV. 1839. Misc. 41: — This

pretty species has flowered imperfectly with Mrs. Loddiges, who received it from Bombay by the overland conveyance. Its exact locality was not before known; the specimens in Heyne's herbarium, where I found the species, affording no information upon that point. In a healthy state the plant forms a tuft of slender clavate stems, from 4—6" high, loosely covered with the withered sheaths of leaves, that have fallen off. From all sides there appear in the flowering season slender spreading racemes about 3" long, having each from 5—9 smallish white flowers, with a greenish-yellow lip beautifully streaked with violet: they have no smell.

Wight Ic. Pl. Ind. or. III. II. 909. 1844. Epiph. on tree branches in Malabar.

99. DENDROBIUM BARBATULUM Lindl. Orch. 44. — Paxt. Fl. G. III. p. 113. c. xyl. 285. — Bombay. Bateman. — Occurs under the name of D. Heyneanum: muslin white flowers, erect spikes. — Lip is threelobed, very slightly downy with 2 short lateral obtuse lobes and a linear callosity reaching as far upwards as the sinus of those lobes. The middle lobe obovate and obtuse. — A transposition of labels, memoranda, sketches led me into the great error of confounding this with the evidently different D. chlorops (B. R. 1844).

100. DENDROBIUM CHLOROPS Lindl. — Bot. Reg. XXX. 1844. Misc. 54.

Caulibus teretibus, floribus laxe corymbosis, pedicellis filiformibus glaucescentibus, sepalis lineari-oblongis, petalis duplo latioribus obovatis, labelli trilobi plani lobis lateralibus nanis acutis intermedio lineari-oblongo apice paulo latiore basi villoso, cornu brevi conico.

Bombay. Habit of D. Heyneanum. Small flowers of a pale nankin colour, while the base of the lip is a light pea green. This gives the flower the appearance of having a green eye.

Bot. Reg. XXX. 1844. Misc. 62. pag. 59. — When dried the parts of the flowers become extremely thin and difficult to examine, and I was thus led to suppose that the lip was undivided. I have however ascertained that it is really 3 lobed and that my D. chlorops is the same species more correctly defined.

Huc: „*Dendrobium barbatulum* Lindl." Wight Ic. pl. Or. III. II. 910. (1844.) — Seems to be a handsome species growing on trees, but of which little is yet known, the specimens from which it was taken up having been poor ones. The one figured here was found in Malabar. Flowers pale straw coloured.

101. DENDRBIUM BICAMERATUM Lindl. — Bot. Reg. XXV. 1839. Misc. 85.

Caulibus fusiformibus, foliis lineari-lanceolatis apice oblique bidentatis, pedunculis lateralibus squamatis 4 floris, floribus concavis subcarnosis, sepalis petalisque subrotundo-ovatis acutis, labelli trilobi lacinia intermedia rotundata apiculata carnosa, lateralibus triangularibus acutis breviore, columnae facie excavata semibiloculari.

North of India. Gibson brought to the duke of Devonshire. Stems grow nearly upright, and are rather short, fusiform, furrowed when old. Flowers little smaller, than those of Maxillaria stapelioides, like them in form, their colour is dull yellow, spotted and streaked with purple. — Flowers grew in fours, on a very short peduncle, closely covered with ovate concave bracts, speckled with purple. The excavation of the face of the column and its division into two cells are remarkable.

102. DENDROBIUM BRISBRANENSE Rchb. fil. Huc: *Dendrobium elongatum* All. Cunn. — Bot. Reg. XXV. 1839. Misc. 33.

Caulibus articulatis teretibus sulcatis elongatis erectis 4—5 phyllis, foliis ovato-lanceolatis acutiusculis apice obliquis emarginatis, racemo terminali 3—10 floro, foliolis perianthii ovatis obtusiusculis, labelli disco 3-carinato lobo intermedio lato cordiformi.

On trees in shaded dark woods, on the banks of the Brisbane River. Sept. 1828. New South Wales. All. Cunningh.

Bot. Reg. XXVII. 1841. Misc. 58. — Flowered with Loddiges. Has erect stems about

1½' high, at the end of which grow about 4 lanceolate leaves from the midst of which springs a raceme of yellowish flowers spotted with red. They seem unwilling or unable to expand.

103. DENDROBIUM CATENATUM LO. 41. — Bot. Reg. XXX. 1844. Misc. 62. pag. 60. —

Labello oblongo apice trilobo.

This has regularly jointed stems, 5—6 inches high, small narrow leaves and flowers with green sepals and white petals. I only know it from a Chinese drawing in the possess of the Hort. Soc.

104. DENDROBIUM DENUDANS Don Prodr. fl. nep. 34. LO. 84. — Lindl. Bot. Reg. 1838. Misc. 156 (XXIV.)

Labelli trilobi oblongi lobo medio emarginato crispo, lateralibus serratis, disco bilamellato.

Received by His Grace the Duke of Devonshire upon Mr. Gibson's return from his Indian mission, and having been sent subsequently imported to others flowered in several coll. The finest specimens I have seen were sent by Mr. Bateman to Msr. Loddiges. Stems erect, 6" high, not very unlike a small state of Dendrobium nobile, and are covered by a profusion of nodding racemes of rather small green and white flowers.

105. DENDROBUIM ALPESTRE Royle Illustr. t. 88. fig. 2. — Bot. Reg. XXX. 1844. Misc. 62. pag. 61.

Caulibus brevissimis ovatis 3—4 phyllis, foliis lineari-oblongis, racemis 3--5 floris erectis, sepalis acuminatis, cornu brevi obtuso, petalis minoribus, labelli trilobi lanceolati lobo medio acuminato crispo basi angustato, lateralibus laceris, disco bilamellato.

Himalaya. — Stems ad leaves only a few inches high. Flowers white, with a purplish lip.

106. DENDROBIUM CUSPIDATUM LO. 43.

107. DENDROBIUM GRAMINIFOLIUM Wight Ic. V. 1. 1649 (1851):

Rhizoma creeping, stems ascending, leafy, leaves sheathing at the base, linear, lanceolate, acute: raceme terminal, slender, 4—6 flowered, flexuose, bracts much shorter than the pedicels, ovate, acute: flowers calcarate, sepals and petals equal, acute, petals narrow, lanceolate; lip cucullate, 3 lobed, lateral lobes small, blunt, middle orbicular crenate, somewhat crisp on the margin; claw united with the prolonged process of the column forming a conical spur.

Courtallum. Aug. Sept. — 4—8" high. Flw. white.

108. DENDROBIUM RAMOSISSIMUM Wight Ic. V. 1. 1648 (1851):

Erect! ramous, lower part of the stem naked, smooth, dark shining brownish-coloured, ramuli leafy: leaves narrow, linear, lanceolate, acute; racemes terminal, short, few flowered: flowers small: sepals ovate, lanceolate, acute, broader than the lanceolate acute entire petals: lip oblong, obtuse, contracted near the apex, forming a suborbicular terminal lobe.

Flowers yellow. — Coorg Jungles. Jerdon. — 18"—2'.

B. Caulis apice tantum foliatus.

§. 1. Caulis basi ima bulbosus, supra bulbum gracilis foliatus.

109. DENDROBIUM PLANIBULBE Lindl. — Bot. Reg. XXIX. 1843. Misc. 70.

Caule compresso distiche folioso erecto basi ovali complanato, foliis oblongis obtusis emarginatis, pedunculo vaginato aphyllo, floribus ter-

minalibus e paleis glumaceis erumpentibus, sepalis petalisque acuminatis, labelli 3 lobi lobis lateralibus dilatato rotundatis intermedio lineari pectinato basi appendice emarginata aucto.

Singular. Manilla. Cuming. Loddiges. Stems 3" high, flattened at the base into an oblong thin edged pseudobulb. The leaves are dull greenish red. Flowers small white veined with purple, placed at the very extremity of a leafless peduncle. It is very near D. Blumei.

110. DENDROBIUM BLUMEI Lindl. Orch. 88. (*Onychium fimbriatum* Bl. Bijdr. 325.)

111. DENDROBIUM TRICUSPE Lindl. Orch. 88. (*Onychium tricuspe* Bl. Bijdr. 32.

§. 2. Caules elongati clavati. (*Dendrocoryne* Lindl., *Desmotrichum* Lindl. ex p.)

A. Flores terminales seu subterminales.

1. 1. Ovarium laéve.

* Labellum non in dentes pectinatos solutum.

112. DENDROBIUM SPECIOSUM Sm. Ex. Bot. p. 17. t. 10. — Bot. Mag. N. S. V. 1831., 3074. — Bot. Reg. XX. 1835. 1610. — Br. Prodr. Fl. Nov Holl. p. 332. — Ait. Hort. Kew. ed. 2 v. 5. p. 212. — Spr. Syst. Veg. V. 3. p. 738. — New Holland plant, long cultivated, which rarely produced blossoms. — Smithii dissimilis pictura orta videtur Hookero inertia pictoris.

113. DENDROBIUM AEMULUM Br. — B. Mag. Vol. III. N. S. 1829. 2906. — Diagn. Browneana. — Sent from New South Wales 1823 by Mr. Cunningham to Kew flow. 1825. Deceb. drawing from Mr. Aiton Esq. — Sepala et petala alba apicibus flava. Labellum medio viride, purpureo pictum, margine album. Cristulae labelli flavae. Gynotemium viride.

114. DENDROBIUM KINGIANUM Bidwill MSS. — Bot. Reg. XXX. 1844. Misc. 18.

Pseudobulbis in collum longum extensis apice bifoliis, foliis ovalibus emarginatis, pedunculo terminali (2—3 floro foliis aequali?), sepalis ovatis mento emarginato, petalis obovatis apiculatis duplo brevioribus, labelli trilobi pubescentis laciniis lateralibus acutis intermedia paulo longiore transverse rhombea angulis lateralibus rotundatis apicali acuto axi elevata trilineata apice tridentata.

New Holl. bought by Ms. Lodd. at the sale of Mr. Bidwill. Pseudobulbs between 4—5 inches long, tapered from an ovate basé into a very long and narrow neck, on the top of which stand two oblong emarginate dark-green rather wavy leaves. Between these is a flower-stalk having 2—3 pink flowers gayly spotted with crimson in the inside. — Bot. Reg. XXXI. 1845. 61. — Hue B. M. 4527. Lem. Jard. Fl. t. 148.

115. DENDROBIUM TETRAGONUM All. Cunningh. — Bot. Reg. XXV. 1839. Misc. 30.

Caulibus gracilibus erectis elongatis quadrangularibus apice clavatis 2—3 phyllis, foliis ovato-lanceolatis acutis undulatis striatis s. nervosis glabris racemo terminali 2—4 floro longioribus, foliolis perianthii elongato-linearibus patentibus, labello vittato: disco tricarinato, lobo medio dilatato subcordato acuto.

An epiphyte, hanging loosely from the stems of small trees, in dry shaded woods, Moreton Bay. June 1828. New South Wales. All. Cunningham.

Bot. Reg. XXVII. 1841. Misc. 8. Flowered with Loddiges. A pretty species with spider like flowers, whose sepals and petals are produced into long tapering points They are yellowish green. bordered with bronish red. The lip is pale yellow, streaked with narrow bands of crimson. Mar. Loddiges cult. it on a piece of dry wood in their Cactus house.

116. DENDROBIUM MACRAEI Lindl. Orch. 75.

117. DENDROBIUM APPENDICULATUM Lindl. Orch. 76. *Desmotrichum appendiculatum* Bl. Bijdr. 330.

118. DENDROBIUM LONGICOLLE Lindl. — Bot. Reg. XXVI. 1840. Misc. 172.

Pseudobulbo compresso in collum longissimum extenso, folio oblongo concavo, flore solitario, ovario filiformi cum pedicello articulato, sepalis petalisque patentibus a lata basi in acumen lineare attenuatis, cornu brevi conico, labello trilobo: lob. lateralibus nanis margine anteriore crispis, intermedio apice ovato plicato crispatoque sublobato, lamellis 2 crispis conniventibus per axin.

A singular Dendrobium belonging to the same section as D. amplum, which is remarkable for combining the habit of Bolbophyllum with the entire structure of the former genus. The neck of the pseudobulb is nearly 8" long; the leaf 5"; the ovary 2½". The flower is pale straw colour, with the ends of the sepals and petals tapering into a fine purple point. Sent to Mr. Loddiges from Sincapore by Cuming.

119. DENDROBIUM PUGIONIFORME Lindl. B. Reg. XXV. 1839. Misc. 34.

Caulibus repentibus nodoso-articulatis radicalibus setoso-stipulatis, foliis elliptico-lanceolatis apice attenuatis acutis carnosis infra fere convexis carinatis laevibus nitentibus, floribus (resupinatis) subsolitariis axillaribus, perianthii foliolis oblongo-lanceolatis acutis patentibus, labello longitudinaliter tricarinato, lobo intermedio dilatato undulato-crispato apice acuto recurvato.

A beautiful epiphyte hanging loosely from the stems of trees so as to swing freely to the wind that sweeps through the forests on the summit of the best of mountains bording the coast district of Illawara, on the west (lat 34¼ S) and flowering in August 1818. All. Cunningh.

Obs. This spec. approaches so near D. rigidum Br. prodr. (not of LO. 86. n. 51.) that I have often viewed it as the same plant which was described by Mr. Brown, from a fig. in the Banksian coll. It now appears to me distinct. Lindl. Hook. B. Journ. III. 1841. 289: Tomsn Austral. 2 Decb. All. Cunningham.

120. DENDROBIUM BIGIBBUM Lindl. in Paxt. Fl. G. III. 1852. 25 c. xyl. 245.

Caulibus elongatis apice 3—5 phyllis, racemis erectis elongatis dissitifloris, petalis subrotundis sepalis duplo latioribus, labelli trilobi lobis rotundatis medio cristato basi gibboso, sepalis lateralibus in calcar productis.

North West coast of tropical New Holland. Lodd. int. — Stems long, narrow, fusiform, tapering at the base, closely invested with dry light brown sheathes, near the end they bear 3—6 long narrow, firm, spreading acute leaves, each with five ribs. The raceme is erect, and consists of 3—4 flowers. Bracts small and scale like. Blossoms rich purple, nearly of same colour as Bletia verecunda. — The lip originates in the sinus above. — The spur of the sepals is moveable, and projects outwards at its base in usual way, so that this flower has a kind of double chin. Nearly allied to D. Kingianum and elongatum.

121. DENDROBIUM HYMENANTHUM Rchb. fil. in Bonpl. III. 222.

Labello flabellatoligulato apice obtuse acuto subdenticulato.

Adest caulis pseudobulbosus tri — quadripollicaris biarticulatus epidermide citrina; forsan ex siccatione angulatus, gracilis, apice diphyllus. Folia a basi angusta oblongoligulata apice obtuse acuta bilobula pollicaria, tertiam pollicis lata, sicca nervosa. Fasciculus bractearum terminalis. Flos hyalinus in perulam obtusam elongatus. Sepalum summum lanceum breve, sepala lateralia perulam efformantia, multo longiora. Sepala lineari falcata. 2185 Cuming. Phil.

122. DENDROBIUM CARNOSUM Tejsm. et Binnendik Naturk. Tijdsch. vor Nederl. Ind. Deel V. 1853.

Pseudobulbis diphyllis oblongis sulcatis basi angustis, foliis oblongis obtusiusculis carnosis mucronatis, floribus solitariis rubro-lineatis, labelli limbo emarginato.

Salak Jav.

123. DENDROBIUM MARGINATUM Tejsm. et Binnendik Naturk. Tijdsch. Nederl. Ind. Deel V. 1853.

Bulbis oblongis quadrangularibus tetraphyllis, foliis loricatis retusis basi angustatis luteo marginatis, racemo solitario 3—5 floro, perigonii phyllis linearioblongis acutis exterioribus latioribus, ovario longissimo, labello trilobo intus calloso, lobis lateralibus obtusiusculis, intermedio multo longioribus acuminatis reflexis.

Salak.

124. DENDROBIUM UNGUICULATUM Teijsm. et Binnendijk. Naturk. Tijdsch. Nederl. Ind. V. 1853.

Bulbis fusiformibus elongatis tetragonis diphyllis, foliis ovato lanceolatis acuminatis coriaceis glabris, floribus solitariis, phyllis perigonii exterioris oblongis acutiusculis, internis obovatis obtusiusculis, labello unguiculato limbo cucullato subtrilobo lobo medio emarginato intus lineolato.

Salak.

125. DENDROBIUM RUMPHIAE. *Cadetia angustifolia* Bl. Rumphia IV. 192. f. 4.

126. DENDROBIUM HETEROIDEUM Bl. Rumphia IV. 193. 6. — 198.

127. DENDROBIUM FUNIFORME Bl. Rumphia IV. 193. 5.

** Labellum apice multifido lacerum.

128. DENDROBIUM CRINIFERUM Lindl. — Bot. Reg. XXX. 1844. Misc. 55.

Caulibus teretibus erectis ramosis, foliis oblongis subundulatis emarginatis, floribus axillaribus lateralibusque solitariis cernuis, sepalis ovatis, petalis linearibus acuminatis, labelli trilobi crenulati lobis lateralibus nanis intermedio apice in filis intricatis multifido lamellis binis undulatis.

Small yellowish flowers of little beauty. Introduced by His Grace the Duke of Northumberland, who received it from Mr. Power in Ceylon. It is closely allied to D. Scopa, but is readily distinguished by its slender stems, wavy leaves; and the shortness of the labellum. The breaking up the point of the lip into numerous threads is remarkable and resembles what occurs in the bearded Bolbophyllums, which are no doubt the Desmotrichum of Blume.

129. DENDROBIUM SCOPA Lindl. — Bot. Reg. XXVIII. 1842. Misc. 55.

Caule erecto clavato compresso ramoso, ramis monophyllis, folio oblongo concavo undulato obtuso floribus in fasciculis axillaribus squamatis petiolatis, sepalis petalisque lineari-lanceolatis, labelli trilobi trilamellati laciniis lateralibus hinc serratis, intermedia elongata triangulari basi serrata apice in filis intricatis dissoluta.

Manilla. Lodd. imp. (273). — Stems a foot high, stiff and strong. The leaves are from 5—6 " long, and two and a half broad. The flowers are small, whitish in axillary fascicles.

130. DENDROBIUM COMATUM Lindl. G. et Sp. O. 76.

131. DENDROBIUM ANGULATUM Lindl. l. c.

2. 2. Ovarium hispidum.

132. DENDROBIUM UMBELLATUM Rchb. fil. MSS. *Cadetia umbellata* Gaud. Voyage autour du monde des Corvettes l'Uranie et la Physique Atlas pl. 33.

133. DENDROBIUM HISPIDUM A. Rich. Voyage de l'Astrolabe. Atlas Tab. 5. Text II. p. 19.

D. caule simplici brevi, basi vaginato, apice monophyllo; folio oblongo-lanceolato; floribus pedicellatis 1—4 ex axilla folii ortis; calycis laciniis lateralibus basi connatis et calcar breve aemulantibus; labello incluso, basi unguiculato et recurvo, superne subcanaliculato trilobo; ovario subgloboso echinato. Nob.

Crescit supra arbores in insula Vanikoro.

Descriptio.

Herbula supra corticem arborum parasitica, caespites densos efformans. — Radix fibrosa, conferta, fibris longis teretibus, albidis, glabris in rimis corticum et inter muscos lichenesque penetrantibus. — E rhizomate assurgunt caules plurimi erecti, 2—3-unciales, apice truncato monophylli et floriferi, sensim a basi versus apicem paulisper incrassati, obsolete triquetri? (an siccatione): juniores vaginis tribus a basi ad apicem circumdati, vagina inferiore breviore truncata, media hujusce longitudinis oblique truncata, superiore multo longiore, usque ad apicem caulis attingente, laxiuscula, oblique truncata: tribus hisce vaginis in adultis evanidis. — Folium unicum terminale cum apice caulis articulatum et facile separabile, sessile, caule paulo brevius oblongo-lanceolatum, apice obtuso obsolete bilobum, carnosum, glaberrimum avenium. — Ex axilla folii nascuntur flores 1—4 pedunculati, bractea vaginaeformi apice acuto-bifida, hinc fissa, circumdati; pedicelli paulo supra basin articulati, parte inferiore breviore persistenti, parte superiore longiore caduca, versus apicem paulisper incrassata, vagina longiores glabri. — Ovarium ovoideo-globosum, pilis incrassatis dense echinatum. Calycis lacinia superior basi lata sessilis subovali-acuta, vix galeato-convexa. Duae laterales similes suboblique ascendentes obtusissimae, obsolete quadratae, basi antice coalitae et in calcar subrecurvum ovario saepe dimidio brevius apice clausum, superne fissum productae. — Laciniae interiores laterales longitudine exteriorum, oblongo-spathulatae, obtusae, angustae, erectae. — Labellum inclusum basi longe unguiculatum, superne concavum, medio longitudinaliter plicatum, subtrilobum; lobo medio multo majore suborbiculari apice acutiusculo; lateralibus minimis obtusis; ungue longiusculo recurvo cum basi producti gynostemii articulato. — Gynostemium breve, postice convexum, semiteres, antice concavum et superne lateraliter quasi bicorne; basi antica cum calcare laciniarum exteriorum continuum. — Anthera terminalis operculiformis, superne convexa, antice obtusa subemarginata, intus bilocularis. Pollinia duo ovoidea, in loculis solitaria, solida, sulco longitudinali quasi bipartita.

134. DENDROBIUM MACROPHYLLUM A. Rich. Voyage de l'Astrolabe Atlas Tab. 9. Texte p. 22.

D. foliis amplis elliptico-oblongis acutis, coriaceis, scapo simplici; floribus magnis spicatis; spica longa interrupta; pedicellis ovarioque hispidis, bractea persistenti lanceolata glabra longioribus; laciniis externis pilosis; interioribus spathulatis acuminatis; labello profunde trilobo, concavo, basi unguiculato. Nob.

Crescit in Nova-Guinea.

Descriptio.

Radix parasitica. — Folia ampla elliptico-oblonga, coriacea, glaberrima, integerrima, striata, apice acuta, basi plicato-vaginantia, subpedalia, circiter 5 pollices lata. — Scapus simplex, teres, bipedalis et ultra, glaber, basi vaginis quibusdam unilateraliter fissis, erectis acutis amplexatus: superne flores spicam elongatam interruptam efformantes gerens. — Flores ampli longe pedicellati, 2—8 approximati, alterni; ad illorum basin adest bractea oblongo-lanceolata acuta, sessilis, persistens; pedicellis bractea duplo longioribus, basi articulatis deciduis, sicut ovarium dense lanato-hispidis. — Calycis laciniae exteriores longitudinaliter venosae, subreticulatae, facie externa pilosae; superior ovali-oblonga acuta, subconcava, erecta; duae laterales

aequales triangulari-oblongae acutissimae, planae, oblique adscendentes, ima basi inter se, mediante gynostemii basi continua, coalitae, non calcar aemulantes. — Duae internae laterales similes, longitudine exteriorum, spathulatae, acuminatae, margine subsinuosae, basi angustatae et longius unguiculatae, erectae, membranaceo-subhyalinae, venoso-reticulatae, glabrae. — Labellum ex apice processus basilaris gynostemii ortum, erectum, basi unguiculatum non articulatum, subrecurvum, facie superiore, lateribus erectis, concavum, profunde trilobum; lobo medio transverse latiore subdiptero apice truncato, apiculato, aliis lateralibus obtusissimis rotundatis; lobis lateralibus truncatis, abrupte in unguem desinentibus; supra unguem in regione media adest appendix rigidiusculus, planus, cristaeformis. — Gynostemium breviusculum vix duas lineas altum, antice concavum, et fovea stigmatica superne excavatum, lateribus apice apiculatis, recurvis; basi, ut jam diximus, productum in appendicem lacinias calycis exteriores inter se coadunantem. — Anthera terminalis operculiformis. Pollinia quatuor approximata, ovoideo-oblonga, inter se tantisper subcoalita.

Obs. L'échantillon unique de cette magnifique espèce, que j'ai examiné avait été recueilli à la Nouvelle-Guinée par le capitaine d'Urville. Les énormes feuilles de cette espece, ses grandes fleurs, dont le pédoncule, l'ovaire et les trois divisions extérieures du calice sont extrêmement velues; sa longue hampe glabre, terminée par un long épi de fleurs, accompagnées chacune d'une bractée persistante, lancéolée, aiguë, glabre, d'un pouce et au-delà forment un ensemble de caractères, qui distinguent facilement cette belle espèce.

Huc: *Dendrobium Veitchianum* Lindl. — Bot. Reg. 1847. Ann. sub. tab. 25. (Ophryde fuciflora):

Caulibus clavatis anguste costatis 2—3 phyllis, foliis sessilibus oblongis apice acutis inaequilateris, racemo erecto multifloro foliis longiore, bracteis ovatis membranaceis acutis, pedicellis sepalisque ovatis acutis extus villosissimis, petalis unguiculatis spathulatis acutis tenuibus glabris, labello maximo alte trilobo, denticulis tribus in medio, laciniis lateralibus ascendentibus rotundatis crenatis flabellatim venosis intermedia convexa rotundata biloba.

We are not sure, that this will not prove a rival to the best of the East Indian Orchids. It is a most beautiful plant, with upright racemes of large mossy flowers nearly two inches in diameter, and a fine stiff habit. Its sepals are a clear dull yellow, the petals pure white, the lip deep green bordered with white, and richly marked with crimson veins. It is from Java, and is in the possession of Mssrs. Veitch, to whom we are indebted for the materials, from which the above description has been drawn up. This, too, is one of Mr. Thomas Lobb's fine things. — De Vriese Illustr. tab. 5 et tab. 11. f. 3.

B. Inflorescentia lateralis.

135. DENDROBIUM CHRYSOTOXUM Lindl. — Bot. Reg. 1847. t. 19. adn.

Pseudobulbis clavatis angustis multicostatis 2—4 foliis, foliis oblongis horizontalibus coriaceis; racemis lateralibus laxis gracilibus arcuatim decurvis pseudobulbis aequalibus, bractea basilari parva spathacea, floralibus minimis herbaceis, sepalis petalisque explanatis oblongis obtusissimis planis his duplo latioribus; labello indiviso cucullato rotundato pubescente, margine minutissime pectinato et fimbriato.

Ind. or. — Flores flavi labii basi citrino brunnea. — Differs from D. densiflorum in its manyangled pseudobulbs, small bracts and curiously fringed pubescent, not shaggy, lip. — From D. Griffithii in its round emarginate fringed lip. — From D. aggregatum in the same respects, as well as in its great clubshaped many-leaved pseudobulbs.

136. DENDROBIUM DENSIFLORUM Wall. — B. M. 3418 (N. S. IX.) 35.

Caulibus articulatis clavatis pendulis apice foliosis, foliis oblongis

acutis nervosis, racemis lateralibus multifloris foliis longioribus: junioribus strobiliformibus, bracteis oblongis plicatis recurvis pedicellis longioribus, sepalis patentissimis ovatis obtusis, petalis conformibus majoribus, labello majore rhomboideo unguiculato serrulato retuso.

Dendrobium densiflorum Wall. Cat. n. 2000. Lindl. in Pl. as. Rar. n. 40. Gen. et Sp. Orch. P. 1, p. 90.

Perig. sulph. labello aureo. — Mart. 85 in Lord Fitzwilliams Collect. at Wentworth. Nepal Wallich.

Bot. Reg. XXI. 1836. 1828. — Perig. luteum, labello medio croceo. — Comes near to Roxb. Dend. clavatum (Hort. Beng. p. 63.), but he adscribes bulbs to his plants, of which ours is entirely destitute. In the Calcutt. garden the two plants maintain that character, although in other respects alike.

137. DENDROBIUM GRIFFITHIANUM Lindl. — Bot. Reg. XXI. 1835. sub 1756.

Caulibus erectis elongatis clavatis sursum tetragonis apice diphyllis, foliis lanceolato-oblongis obtusis, racemis laxis flexuosis multifloris pendulis e latere caulium natis, bracteis oblongis membranaceis pedicellis 4-plo brevioribus, petalis oblongis ciliolatis sepalis duplo latioribus, latioribus, labello ovato pubescente denticulato subrepando, capsulis pyriformibus angulatis.

Reg. Burman. supra arbores W. Griffith (hab s. sp. comm. cel. Griffith). — A beautiful species with much the appearance of D. aggregatum.

138. DENDROBIUM FARMERI Paxt. Mag. XV. — Bot. Mag. 4659. — Van Houtte Flore des Serres VII. 741. — Pescatorea I. t. 4. — Lem. Jard. fl. tab. 307. — Paxt. Fl. Gard. III. 104.

Caulibus elongatis clavatis articulatis profunde sulcatis basi pseudobulbosis apice foliosis, foliis 2—4 ovatis coriaceis striatis, racemis lateralibus multifloris pendulis, bracteis parvis ovatis concavis, sepalis (alboflavescentibus roseo tinctis) late ovatis obtusis, petalis conformibus (ejusdem coloris) majoribus, labello majore (pallide flavo disco luteo) rhomboideo obtusissime unguiculato supra pubescente margine denticulato.

Hook. — Sent by Dr. M. Clelland from Calcutta Garden to W. G. Farmer Esq. after whom it was named. Very near D. chrysotoxum.

139. DENDROBIUM PALPEBRAE Lindl. Lindl. Paxt. I. p. 45. n. 82. — Flowers white with a lip stained with yellow. In the way of D. densiflorum, with the parfume of distant haw thorn. Its stems are more slender than those of the species just named; flowers in loose racemes and white, with a deep yellow stain at the base of the lip, which is not only covered with soft down, but is fringed near the base with long hairs, like eye lashes. These elevated lines pass along the middle and terminate near the base in a 3 lobed tubercle for the purpose of receiving which the base of the column is hollowed out into an oblong cavity. — Veitch. Nov. 1849. Journ. H. S. V. 33.

140. DENDROBIUM AGGREGATUM Roxb. — B. M. 3643 (XII. N. Ser.) 39.

Pseudobulbis caespitosis monophyllis ovatis sulcatis stipitatis cuticulo cinereo vestitis, foliis oblongis emarginatis coriaceis nervosis, racemo laterali cernuo multifloro fere duplo brevioribus, petalis ovatis sepalo latioribus, labello subintegerrimo latiore, quam longo, basi concavo pubescente.

Dendrobium aggregatum Roxb. Fl. Ind. V. 3. p. 477. — Lindl. Wall. Cat. B. Reg. XX. 1835. 1695!

Perigonium sulphureum. Labellum basi aureum. — The plant was received at the Bot. Gard., Edinburgh from Wentworth the seat of Earl Fitzwilliam in 1836, and flowered in the beginning May 37. — Arracan on the northern border on the trunk of Lagerstroemia Reginae. Pierard. Banks of the Chappadones river in the Golf of Martaban. Wallich Bot. Reg. XX. 1835. 1695.

141. DENDROBIUM COMPRESSUM Lindl. — Bot. Reg. XXVIII. 1842. Misc. 76. — B. R. XXX. 1844. 58.

Caule obovato compresso 2—6 phyllo, foliis ovalibus acutis striatis basi dilatatis membranaceis amplexicaulibus, racemis subquadrifloris cernuis, sepalis petalisque ovatis erectis, cornu elongato obtuso, labello cuneato laevi per axin sulcato.

Yellow flowers of middle size, singular compressed stems not more than 3—4 inches long.

§. 3. Caules seu pseudobulbi brevissimi. (*Bolbodium* Lindl.)

1. 1. Labellum indivisum.

142. DENDROBIUM JENKINSII Wall. — Bot. Reg. XXV. 1839. 37.

Pseudobulbis aggregatis oblongis tetragonis monophyllis, foliis oblongis coriaceis marginatis retusis, pedunculis subradicalibus unifloris vel racemosis, sepalis ovatis obtusis petalis multo minoribus, labello cucullato rotundato basi parum producto limbo dilatato serrato villoso emarginato.

Dr. J. Wall. in litt. — „I received it from Capt. Jenkins Nov. 26. He had obt. it at Goalpara" Wallich.

D. Jenkinsii. Label broader than long, repand, sligthly 2 lobed, shaggy, serrated.

D. aggregatum. Label broader than long, scarcely wavy, undivided, downy only near the base.

D. *densiflorum.* Label cordate, repand, twolobed, reflexed at the point, serrated.

D. Griffithianum. Label ovate, slightly hastate, serrated, downy, except near the edges.

Perigonium totum aureum.

143. DENDROBIUM PYGMAEUM LO. 45. — Bot. Reg. XXX. 1844. Msc. 62. p. 62. — A very small plant, forming tufts. Very near D. microbulbon, but different in the frem of the lip; and the flowers are much smaller.

Obs.: Non idem est: „*Dendrobium? pygmaeum* All. Cunn. D. Caleyi Cunn. in Bot. Mg. Comp. II. 377. On rocks in the Illawara district. Flowers not known. New South Wales." All. Cunningham Bot. Reg. XXV. 1839. Misc. 32. — Note. Dend. pygmaeum (A. C. Miss. c. 1824) has somewhat longer, acute, smooth leaves; but I possess no specimen in flower to describe it. If it be a Dendrobium it may be called Caleyi. Mr. Caley found it first in New South Wales.

144. DENDROBIUM PUSILLUM Lindl. Orch. 77. *Desmotrichum pusillum* Bl. Tab. t. 35.

145. DENDROBIUM LAMELLATUM Lindl. l. c. *Onychium lamellatum* Bl. Tab. 10.

146. DENDROBIUM SUBACAULE Reinw. (Nomen solum prius publici juris a Lindley factum.) Descr. Conf. Contrib. to Indian Orchidology.

147. DENDROBIUM PLICATILE Lindl. — (*D. fimbriatum* LO. 76.) — Bot. Reg. XXV. 1840. Misc. 7. — Manilla imp. Rollisson. It has solitary, rather large flowers of a dull yellow a little tinged with red, and a curious plaited labellum. The original name of this plant being the same as that applied to a very different species it has become necessary to substitute another, which I have taken in allusion to the very conspicuous plicature of the label.

2. 2. Labellum trilobum.

148. DENDROBIUM MICROBULBON A. R. T. 8. — Ann. sc. nat. nov. ser. XI. 1841. p. 19.

Pseudobulbis aggregatis, parvulis, ovoideis, sulco transversali in 2 partes divisis, apice acutiusculis, diphyllis; foliis oblongo-linearibus,

submembranaceis, acutis; scapo gracili, foliis longiori, apice trifloro; floribus pedicellatis, basi bracteatis, bracteis lanceolatis, acutissimis, pedunculi longitudine; sepalis interioribus linearibus, obtusis; labello crasso, erecto, arcuato, subcanaliculato, quasi trilobo: lobis lateralibus minimis, medio rotundato obsolete crenulato,

Supra arbores circa Otacamund. Jul. — Sept. Nilgherries. Perrotet. — Planta 3—4 uncias alta; labellum pallide virens, sepala albido-subcarnea. — Affine D. alpestri Royle. Mais les feuilles sont plus étroites, oblongées; chaque bulbe ne porte qu'une seule hampe, soutenant 3—4 fleurs, tandis que dans le Dendrobium alpestre il sont 3—4 hampes ayant chacune 3—5 fleurs.

Huc: *Dendrobium humile* Wight. Ic. V. I. 1648 (1851). — Caespitose, pseudobulbs ovate, covered with the sheaths of fallen leaves, leaves often wanting, when present one or two from the apex of the bulbs linear lanceolate, about the lenght of the scape; raceme erect, 4—8 flowered: bracts small, linear, subulate, lateral sepals acute subfalcate forming with the process of the column an acute spur, posterior divaricato lanceolate; petals lanceolate, narrower than the posterior sepal: lip large 3 lobed, middle lobe crenulate, crisp, suborbicular, lateral ones entire, or slightly crenate. Flowers greenish yellow, tipped with pink, lip pink with darker crimson lines. — Jyamally Hills, trees. July, August. Except that this belongs to Lindley's first section, having pseudobulbs bearing the leaves, it seems to approach very near Dendr. denudans and alpestre; from the latter it is certainly distinct. I am not quite so certain in regard to the former; the pointed divaricating spur of this species is its most sheaking feature.

Huc: *Dendrobium crispum* Dalzell in Hook. Journ. Bot. IV. 111.

D. crispum (nobis); foliis serotinis paucis lineari-lanceolatis subcomplicatis, floribus racemosis 6—10, ovario florem aequante basi bractea parva scariosa suffulto, sepalis petalis brevioribus, supremo lineari-lanceolato obtusiusculo, lateralibus subfalcatis, petalis spathulatis, labello sepalis breviore 3-lobato, lobis 2 erectis acutis, intermedio truncato margine irregulariter crenato albo roseo-maculato basi cornubus 2 erectis acutis praedito, columna utrinque apice breviter cornuta.

Tota 4—5 poll. alta, floribus albis, labio excepto. — Crescit in arboribus ubique; fl. temp. frigido — The pseudobulbs of this very common plant are small, button-shaped, and green, with a white network over them; the peduncle is delicate, filiform, purple, two and a half to three inches long, glabrous and smooth, with tubular sheaths. The fruit is oval, shining, four lines long. Lindley has sixteen species of this section in his „genera and species", but not one from Continental India, where they are plentiful.

149. DENDROBIUM EXTINCTORIUM Lindl. — Bot. Reg. XXI. 1836 sub 1756.

Pseudobulbis depressis orbiculatis aggregatis, foliis . . . ., pseudobulbis terminalibus unifloris, sepalis lateralibus posticis basi longe in calcar extinctoriiforme productis, labelli ungue longissimo tenui, limbo trilobo: lobis lateralibus erectis acutis intermedio oblongo rotundato, capsula pyriformi angulata.

Hab. in Regno Burmano locis humidis supra truncos Careyae arboreae W. Griffith, (hab. sp. comm. cel. Griffith).

150. DENDROBIUM CYMBIDIOIDES Lindl. — Bot. M. 4755. 1853.

Pseudobulbis oblongo-ovatis 4—5 gonis, foliis binis oblongis retusis pseudobulbos vix excedentibus, scapo terminali 5—9 floro, sepalis petalisque lineari-oblongis obtusis aequalibus patentibus ochraceis, labelli disco basi abrupte calloso lineato, lobo medio ovato tumido.

Lindl. vidit Ic. Reinw. — Rollison. — Gard. Chronicl. 1854. 219.

151. DENDROBIUM ELONGATUM Lindl. Orch. 77. *Desmotrichum elongatum* Bl. Bijdr. 332.

152. DENDROBIUM GEMINATUM Lindl. Orch. 77. *Desmotrichum geminatum* Bl. Bijdr. 332.

153. DENDROBIUM TRIFLORUM Lindl. Orch. 77. *Desmotrichum triflorum* Bl. Bjdr. 331.

154. DENDROBIUM GRANDIFLORUM Lindl. Orch. 77. *Desmotrichum grandiflorum* Bl. Bijdr. 331.

155. DENDROBIUM CONVEXUM Lindl. Orch. 78. *Desmotrichum convexum* Bl. Bjdr. 331.

156. DENDROBIUM ANGUSTIFOLIUM Lindl. Orch. 78. *Desmotrichum angustifolium* Bl. Bjdr. 330.

Subordo II. *EPIDENDREAE.*

1371. EPIDENDRUM *L.*

Hue: Lindley, Folia Orchidacea Fol.' I. Part. II. III. IV.:

Sepala patentia, subaequalia, lateralibus basi haud productis. Petala nunc conformia et aequalia, nunc diversissima. Labellum unguiculatum, cum columna parallelum et omnino v. parte connatum: limbo integro v. diviso, basi saepius callo duplici, costa v. tuberculo nunc interjectis, instructo; nunc verosimiliter in calcar productum pedicello immersum ideoque columnae cuniculum formans. Columna elongata: clinandrio marginato saepe fimbriato, semiteres, ecornis, basi saepius cuniculata. Pollinia 4, cereacea, aequalia, compressa; caudiculis totidem replicatis; glandula libera nulla. Anthera carnosa, 2—4-locularis.

Herbae epiphytae Americae calidioris, nunc terrestres. Caulis nunc pseudobulbosus, nunc elongatus foliosus. Folia carnosa, rarissime venis elevatis striata. Flores solitarii, spicati, racemosi, corymbosi v. paniculati, terminales v. laterales, saepius sicci coriacei, raphidibus farcti.

In this extensive genus, there exist such very remarkable differences in the manner of growth, as would almost justify the creation of several distinct genera for their reception. The three first divisions in the following classification have, for instance, a pseudobulb instead of a true stem, and a lip free from the column instead of being adherent to it; but on the other hand, four other divisions have a pseudobulbous growth combined with an adherent lip, and among the Osmophytes and Encyclium species, the lip adheres to the column in different degrees; so that such distinctions fail when applied to practice. Beyond these differences, I see little that promises to be available for generic purposes: and since it must be admitted that there is something in the peculiar aspect of the genus which usually points it out to even an inexperienced eye, any proposal of new genera seems to me unadvisable.

The essential character of the genus resides in the lip being more or less united by a fleshy base to the edges of a column, which is hornless and considerably elongated, but not petaloid and winged; in the pollen-masses being four, equal, compressed, with as many pulverulent caudicles folded back upon them; and finally in the presence of a cuniculus more or less deep at the base of the lip. Among the genera most nearly allied to Epidendrum, *Isochilus*, of which Hexisea is a section with adnate labellum, has two caudicles to which the pollen-masses adhere by their whole face; *Ponera* is an Isochilus with the mentum of a Maxillaria; *Dinema* is remarkable for its two-horned column, etc., and pair of caudicles; *Barkeria*, so like Amphiglottium in habit, has a petaloid column; *Physinga* has a scrotiform free spur, etc.; *Broughtonia* differs in having an external adnate spur, and a mebraneous cucullate lip. As to *Alamania*, the transverse appendage of its lip, and some peculiarity of habit, are all that it can be said to have for its character.

For the reasons above given, I do not think it expedient to regard the following

divisions as anything more than sub-genera; when they possess distinctions beyond what are mentioned in the analytical table, those points will be adverted to at the head of each sub-genus.

ANALYSIS OF THE SUB-GENERA.

Labellum fere liberum.
  Flores e spatha . . . . § 1. *Epicladium.*
  Flores nudi.
    Caulis pseudobulbosus . . . . § 2. *Encyclium.*
    „ fusiformis . . . . § 3. *Diacrium.*
Labellum adnatum.
  Caulis pseudobulbosus.
    Flores sessiles . . . . § 4. *Hormidium.*
    „ racemosi v. paniculati.
      Inflorescentia radicalis . . . . § 5. *Prilanthemum.*
      „ terminalis.
        Labellum fissum . . . . § 6. *Aulizeum.*
        „ indivisum . . . . § 7. *Osmophytum.*
  Caulis repens, squamatus . . . . § 8. *Lanium.*
  „ foliosus strictus.
    Inflorescentia terminalis.
      Spatha 1, magna . . . . § 9. *Spathium.*
      Spathae plures, imbricatae . . . . § 10. *Amphiglottium.*
      Spatha o . . . . § 11. *Euepidendrum.*
    Inflorescentia lateralis . . . . § 12. *Pleuranthium.*

Obs. Cum jam otium haud superait, quo vellem uti ad totum genus denuo ordinandum ad illa principia, quae in Xeniis I. 135 explicavi et quae adhuc optima credo, hodie subgenera Lindleyana accipio, deletis bene Lanio et Hormidio, plane inanibus. Subgenera primaria mea in prima linea quidem pono. Spathas in omnibus Epicladiis adesse (e. gr. hastato, citrino) non contendo.

A. *ACRANTHIUM* Rchb. fil. Xenia I. 135.

Inflorescentia tenminalis.

§ 1. *Epicladium* Lindl. in Hook. Journ. III. 81.

In this section the structure of the flower is nearly that of Encyclium, but the flowers grow out of a great spathe, as in Spathium, and the pseudobulbs are evidently assuming the condition of an ordinary stem. In E. aurantiacum the calli or linear plates so common in the genus are replaced by three raised lines, the ovary has a very long cuniculus, and the flowers have the regularity of the Hexisean Isochiles.

a. Labellum integrum.

† Pseudobulbi ancipites.

1. EPIDENDRUM HASTATUM Lindl. Hook. Journ. III. 82. Lindl. l. c. sub 21.

E. pseudobulbis . . ., foliis . . ., racemo stricto 6—7-floro, sepalis petalisque discoloribus lanceolatis acutissimis patentibus, labello subrotundo subangulato basi utrinque supra unguem lobulo aucto: venis baseos elevatis.

Wild in Mexico, in the temperate region, (v. s. sp. comm. b. Zuccarini.) — A species with deep purple striated sepals and petals, and a broad ivory white lip. The latter has generally a short lateral lobe on each side of its base so as to acquire a hastate form, but occasionally the lobes are almost obliterated. (Lobulum non vidit Rchb. fil.)

2. EPIDENDRUM BOOTHIANUM Lindley, in Bot. Reg. 1838, Misc. n. 7. Huc Lindl. l. c. N. 3.

E. pseudobulbis compressis imbricatis ovatis subdiphyllis, foliis ligulato-oblongis undulatis apice subobliquis, racemo laxo sub-7-floro basi spathaceo foliis longiore, sepalis petalisque subaequalibus patulis ovali-linearibus acutis, labello semilibero rhomboideo acuto utrinque deflexo.

Wild in Cuba; in the forests of the coast of Saltadero, Guantanamo — Linden, (v. v. c. et s. sp.). — Pseudobulbs like those of Broughtonia. Flowers nodding, sweet-scented, yellowish orange, spotted with purple. Lip white, spathe green, compressed, about two inches long, rising nearly as high as the lowest flowers.

†† Pseudobulbi fusiformiteretes.

3. EPIDENDRUM BICOLOR Rchb. fil. MSS. Huc: *Cattleya bicolor* Lindl. Bot. Reg. 1836. sub 1919:

Foliis oblongo-loratis caule tereti elato triplo brevioribus, sepalis lanceolatis falcatis acutis, petalis parum latioribus subundulatis obtusis, labello indiviso plano apice dilatato rotundato crenato convexo.

Brazil Descourtilz in Bibl. Deless. 49. Stems 2—3′ long. Sepals and petals tawny; label bright purple, with a lanceolate streak on the centre, white slightly spotted with purple. Fragrant. — Lindl. Sert. 1838. V. 1.: From Jesus de Bannal. Aprili. exhales the sweet smell of the garden pink. — Rhizome reddish, cylindrical articulated. Stems often pendulous, 2—3′. Sepals greenish brown, purple or reddish brown. Petals thinner, spathulate, crisp, same colour. Lip pure white, forming a line which extends as far as the middle of the disk, where it is dotted longitudinally with purple. At the level where this line termins, the disk enlarges and forms a rounded blade of a bright violet; turned downward, and regularly crenelled at the edges. Column very thick, broad, convex above, flat or a little concave beneath, white. — Bot. Reg. XXIV. 1838. Misc. 148. — Flowered with Loddiges. Agrees perfectly with the figure above quoted and is very remarkable for its labellum wanting thé side lobes, so that it is only curved downwards, and cannot wap up the column as is the other species of the genus. — Sepals and petals are a dull tawny olive green; the labellum is of the deep violet, which we find in the centre of that of Cattl. labiata.

4. EPIDENDRUM AURANTIACUM Bateman, in Bot. Reg. 1838, Misc. 11; Orch. Mex. and Guat., t. 12. — Lindl. l. c. N. 1.:

E. foliis oblongis planiusculis coriaceis caule clavato diphyllo duplo brevioribus, spatha maxima cucullata pedunculo longiore, racemo brevi subcernuo densifloro, sepalis petalisque lanceolatis acutis subaequalibus, labello libero oblongo cucullato basi columnam involvente lineis tribus elevatis.

Wild in Mexico, Sierra St. Pedro Nolasco — Jurgensen, 879; Guatemala, on exposed rocks on the precipitous brows of ravines, where it is subject to great extremes of heat and cold — Skinner: on the branches of Taxodium distichum — Grisebach, B. 25; Oaxaca, at St. Juan de Nepomuceno — Karwinski in herb. Martius, (v. s. sp. et v. cult.) — Flowers numerous, rich orange-colour.

Huc: *Epidendrum aureum* Lindl. l. c. N. 5:

E. sepalis linearibus acutis, petalis conformibus, labello ovato convoluto acuminato ecalloso venis 3 parallelis centralibus, ovario alte cuniculato.

Broughtonia aurea Lindley, in Bot. Reg. 1840, misc. 22.

Wild in Mexico; in the neighbourhood of Valladolid — Barker, (v. v. c.). — „Flowers bright yellowish red, like E. vitellinum.“ I still possess the only flower I ever saw of this. Although I can add little to what was stated in the Botanical Register, I can say that it is a species apparently perfectly distinct.

b. Labellum trilobum.

aa. Lobi laterales in ima basi.

5. **EPIDENDRUM ACKLANDIAE** Rchb. fil. MSS. Huc: *Cattleya Acklandiae* Lindl. — Bot. Reg. XXVI. 1840. 48.

Foliis oblongis, floribus subsolitariis, sepalis petalisque herbaceis lanceolatis aequalibus incurvis maculatis, labelli plani calvi hypochilio dilatato-patulo subrepando epichilio orbiculari reniformi emarginato.

Labellum et gynostemium kermesino violacea: perigonii phylla 5 olivacea rufo guttata, folia juniora rufo guttata. — Brazil. Oct. 1839. discov. by Lieut. James of H. M. Ship Spey, and flowered in the stove at Killerton, in the month of July 1840 under the able management of Mr. Craggs, Sir Thomas Aclands gardener. — Together with Cattleya bicolor it forms a distinct section of the genus, distinguished by the base of the lip being too narrow, and too spreading, to cover the column.

Bot. Reg. XXX. 1844. sub 5. — Van Houtte Flore des Serres. VII. Tb. 674.

Obs. Ex labelli natura huc esset conferendum E. Walkerianum (Cattleya Walkeriana Gardn., C. bulbosa Lindl.). Ex floris ortu contra inter Psilanthema debet migrare, quae confer.

bb. Lobi laterales mediani, prope cum lobo medio (nunc emarginato) confluentes; labellum circa columnam volutum.

6. **EPIDENDRUM HUEGELIANUM** Rchb. fil. MSS. Huc: *Cattleya Skinneri* Batem. Orch. Mex. 3. Guet. t. 13. — Lindl. B. Reg. XXX. 1844 sub 5.

Caulibus obovatis, longioribus, quam foliis, folia binis ovalibus obtusis, spatha abbreviata, sepalis angustis oblongis-lanceolatis rectis, petalis oblongis 3plo latioribus, labello integerrimo convoluto emarginato plano „columna nana 3plo longiore."

Guatemala. — Flowers deep rich rose colour, with a crimson lip, resembling those of C. Skinneri *). This plant inhabits the hot damp coast, on very high trees, and is most difficult to get at, except after a storm that may have chanced to throw down some of the large forests trees. It should be well watered daily, to represent the heavy dews and the rains, which latter are from May to Novb. Mr. Skinner recommends care to be taken, that it may not imbibe too much moisture, as its habitat is on branches of large trees seldom having any lichen, where the heavy rains do not lie. It does not seek too much shade, but rather like Epid. aurantiacum exposed places. Climate 80° — 85° and sometimes 95° during the day. — Bot. Reg. XXVI. 1840. Misc. 83: Flowers in Jan. and February; vulgarly called: Flor de San Sebastian, from its being in season and adorning the altars on that saint's day (20 th. of January)" Skinner.

B. Mag. 4270: *Cattleya Skinneri.* Pseudobulbis valde incrassatis oblongis basi attenuatis, foliis binis oblongis obtusis, pedunculo plurifloro, sepalis oblongis, petalis ovato rotundatis, labello panduriformi obscure trilobo, lobis lateralibus convolutis, terminali lato brevi retuso disco canaliculato, columna perbrevi.

b. *parviflora* Hook. B. Mag. 4916. Huc: *Cattleya Deckeri* Klotzsch in Otto et Dietrich Allg. Gartenz. 1855. XXIII. 81: Pseudobulbis elongatis laevibus compressiusculis, inferne longi attenuatis; foliis binis crasso-coriaceis ellipticis utrinque obtusis, apice subemarginatis; pedunculo brevi 6—8 floro; perigonii foliolis lilacinis oblongis recurvato-acutis, exterioribus tribus angustioribus integerrimis patentibus, basi brevissime-connatis, interioribus latioribus erectis, margine undulato-lobatis; labello oblongo integerrimo laevi saturate lilacino, basi convoluto breviter cordato, apice re-

*) Ita!

curvato-acuto; columna elongata stricta atro-purpurea, dorso convexa, subtus plana, apice albino-tridentata; anthera pallide-lilacina convexa quadriloculari.

7. EPIDENDRUM LUTEOLUM Rchb. fil. MSS. Huc: *Cattleya luteola* Gardn. Chronicle 1853. 774 c (3. Decb.):

Pseudobulbis ovalibus ancipitibus sulcatis monophyllis, foliis oblongis vel obovato oblongis floribus longioribus, spatha angusta membranacea pauciflora, sepalis petalisque aequalibus concoloribus angustis ovalibus obtusis flavis, labello cucullato indiviso apice rotundato crenulato intus plano velutino, columna utrinque unidentata.

Hanbury Esp. obt. It as a Brazilian plant from Mssr. Backhouse of York. — Largest of pseudobulbs are not more than 2 inches long. — Leaves hard, flat, 6' long. — Flowers have the whole yellow colour of Laelia flava, habit and pollenmasses of Cattleya. — Velvety lines of lips are delicate and peculiar. — There is no diff. in depth of col. in any part of the flower except in the edge of the lip, which is paler.

Huc: *Cattleya Meyeri* Regl. Index sem. Petrop. 55.

Sepalis lineari-oblongis subfalcatis acutiusculis revurvo-patentibus; petalis subconformibus erectis; labello indiviso lobato cucullato, antice rotundato crenulato crispo.

Planta C. Forbesii habitu et florum colore simillima, flores autem minores et labellum indivisum. Pseudobulbi oblongi, compressi, utrinque attenuati, longitudinaliter canaliculati, 3—4 pollices longi, ½—¾ pollices lati, juniores vagina membranacea involuti, folio unico oblongo obtuso coriaceo obscure-carinato ¾—1½ pollices lato, 4—8 pollices longo terminati. Racemus terminalis, suberectus, abbreviatus (5-florus) vagina membranacea fultus. Pedicelli subhorizontaliter patentes, florem superantes. Sepala pallideflavescentia v. flavo-viridia, circiter pollicem longa. Labellum sepalis paullo brevius, flavescens, utrinque ad nervum striis carmineo-purpurascentibus notatum, antice flavum omnino glabrum. Columna semiteres, alis tenuibus superne paullo latioribus, labello duplo brevior. Anthera 4-locularis, septis membranaceis. Pollinia 4, per paria caudicula reflexa juncta.

8. EPIDENDRUM LABIATUM Rchb. fil. MSS.

a. Genuinum.

Huc: *Cattleya labiata* Lindl. B. Reg. XXVI. 1840. 58.

Sepalis lineari-lanceolatis, petalis membranaceis undulatis multo latioribus, labello obovato crispo-undulato obtuso v. emarginato disco laevi, pseudobulbis oblongis sulcatis.

α. petalis lanceolatis undulatis, labelli disco sanguineo.

Cattleya labiata Lindl. Coll. bot. t. 33. LO. 118. Hook. exot. fl. t. 157. Lodd. Bot. Cab. 1856. — Hook. B. Mag. 3998:

Pseudobulbis sulcatis, sepalis oblongo lanceolatis, petalis lato ellipticis undulatis, labelli obovati obtusi indivisi lamina superne tota cocc.

Hooker sentit, Lindl. recte huc ducere Cattl. Mossiae, at in hac „the uniform deep blotch on the lamina of its labellum remains unaltered."

Lond. Journ. 1842. p. 540: On rocks near the summit of the Piedra Bonite at Tejucee. Novb. Gardner 244.

var. *superba* Regel. Gartenfl. V. tb. 146.

a et b. genuinum et Mossiae:

Bot. Reg. XXX. sub 5.:

α. petalis oblongo-lanceolatis undulatis, labelli disco sanguineo. C. labiata L. Coll. t. 33. Brazil.

β. petalis latioribus subcrispis, labelli disco luteo sanguineo punctato aut picto. La Guayra.

Var. of what has been called C. Mossiae are numerous, and seem to prove that no re-

liance can be placed on the supposed distinctions between it an C. labiata. It must however be confessed, the question is open to further examination.

Lindl. Paxt. Fl. G. I. 6: *C. labiata* Lndl. Coll. B. t. 33. — Bot. Reg. 1859. — B. M. 3998. — Alias *C. Mossiae* B. M. 3669. — B. R. 1840. 58. — The two forms differ in little except colour. In C. labiata the lip is stained with a deep uniform tint of crimson; in Mossiae it is richly variegated with crimson veins upon a yellowish ground. The first is from swamps of Brazil; the latter is from the Caracas, 3000′ about see. — *C. quadricolor*, in possesion of Mr. Rucker, I am not sufficiently acquainted with.

b. Mossiae:

Huc: *Cattleya Mossiae* Parker Hook. B. Mag. 3669:

Caule elongato ramoso pseudobulbifero, pseudobulbis oblongis sulcatis, floribus giganteis speciosissimis, sepalis lanceolatis, petalis elliptico-ovatis unguiculatis marginibus oblique crispatis, labello latissimo obovato intus flavo oblique coccineo striato, ungue in tubum superne acutissimum conduplicato, limbo bilobo pulcherrime crispato crenulato.

Fragrance like Gymnadenia conropsea, but much stronger. 7¼′ engl. in diameter from the tip of the upper sepal to the tip of the labell, 8¼″ from tip to tip of opp. sepals. — 24″ circumf. Flowered with Mss. Moss of Otterspool near Liverpool, the name of her is suggested by my friend Mr. Parker. — Introduced through the medium of George Green Esq. of Liverpool 1819′ from La Guayra.

Bot. Reg. XXVI. 1840. 58.

C. labiata. β. petalis oblongis subcrispis, labelli disco luteo sanguineo punctato aut picto. (Mossiae.) — La Guayra.

The characters relied upon to separate it are: 1) its branching stem; 2) its furrowed pseudobulbs; 3) its broader sepals and petals and larger flowers; 4) its unguiculate petals; 5) its colour: but none of these distinctions can be relied upon.

Lindl. Orchid. Lindenianae p. 10. n. 55.: Near Caracas at 3000′ March 1842.

Lindl. Paxt. Fl. G. I. 117. Tab. 24. *Cattleya labiata*: Large importations have been made from Caracas and New Granade of a C. with pinker flowers, much crimson, while the spaces between were yellowish or white or both; some of them had crimson veins run together = C. Mossiae. — Very diff., but no distinctive character. Our variations are called:

C. labiata candida (white rubby lipped).

C. labiata picta (blotched) (utraque varietas in V. Houtte Fl. S. VII. 661 et 660 iterata).

Cattleya labiata Lindl. Rchb. fil. Bonpl. II. 24. Caracas 3500′. Nov. Wagener.

c. Wageneri.

Cattleya Wageneri Rchb. fil. Bonpl. III. 21.

Pseudobulbo cylindraceo basi attenuato monophyllo, folio oblongo basi attenuato, spatha elongata acuta (ad iconem), pedunculo bifloro, perigonio patulo, sepalis linearilanceolatis acutis firmis, tepalis sensim cuneatis in laminas oblongas basi latiores sensim paulo attenuatas apice retuso rotundatas, margine subtilissime crenulatas, minute plicato undulatas, labello tota conformatione subaequali, a basi lata cuneato producto, obsolete trilobo, lobo medio magno emarginato bilobo, toto margine valde undulato, disco subvelutino.

Die Verwandten der C. labiata zerfallen nach dem Grund der Tepala in zwei Abtheilungen: die mit keilförmig allmählig aufsteigendem Grund sind C. maxima Lindl., lobata Lindl. und diese. C. maxima liegt vor mir in Originalblüthen von Hartweg, Blüthen von v. Warscewicz und in Abbildung B. R. 1846, 1. Die Blüthe ist kleiner, die Sepala sind breiter, die Tepala schmäler, vorn spitz. C. lobata kenne ich nur

nach Gard. Chronicle 1848. 408. Sie ist viel kleiner und hat deutlich lappige Tepala, breitere, kürzere Sepala, muss viel kleinere Dimensionen haben. Die vorliegende Pflanze verdankt ihre Haupteigenthümlichkeit der wunderbaren Gestalt der Tepala, 1½ Zoll vom Grund hat die keilig ansteigende Linie die Höhe erreicht, von der sie allmälig abfällt, um von da an manchen Blüthen (es liegen mir 5 vor) etwa 6mal so breit aufzuhören, als sie am Grunde ist. Dazu ist das Aderwerk sehr eigen, die letzten überaus zahlreichen Adergabeln stehen am Rande fast rechtwinklig auf der Längslinie der Lippe. Diese prächtige Art hat schneeweise Blüthen, von der Lippenscheibe strahlen goldige Linien divergirend aus. Dazu füge man, dass sie 2—2mal so gross sind, als die der Laelia crispa Rchb. fil. (Cattleya crispa Lindl.), und man wird begreifen, dass wir von Herrn Wagener eine neue Schönheit ersten Ranges zu erwarten uns schmeicheln dürfen. Caracas. 4000'. Mai. Wagener.

d. Warscewiczii.

Huc: *Cattleya Warscewiczii* Rchb. fil. Bonpl. II. 112.

Aff. C. labiatae pseudobulbo fusiformi elongato, racemo plurifloro (4—8) (labello coeruleolilacino).

Pseudobulbus cylindraceus folio oblongoligulato apice attenuato aequilongus seu longior, racemus — 8florus, folium aequans seu eodem longior. Spatha — — usque ad bracteam floris infimi protensa, sepala cuneata lanceolata acuta, tepala a cuneata basi sensim ascendentia tertiam usque inde paulo apicem versus attenuata, apice retusiuscula, minutissime crenulata, labellum basi angustiori utrinque subsemicordatum, late oblongum, apice retusiusculo bilobum, utrinque ante medium sinuatum minute denticulatum, undulatum, disco (in sicco) velutinum. — Diese wunderschöne Art hat Hüllblätter von weisslichem Lila; die Lippe ist himmelblau mit einem Stich in Lila und über der Mitte steht beiderseits ein scharf begränztes Goldauge; die Tepala zeigen am Grunde einen andern Schnitt als C. labiata; die Gestalt der Pseudobulbi und die vielblüthige Inflorescenz sind treffliche Merkmale. Warscewicz. Rchb. fil. Xenia Orchidacea p. 78. tb. 31.

e. Trianaei.

Cattleya Trianaei Rchb. fil. — *C. labiata* Lindigii Karsten.

f. pallidum.

Cattleya pallida Lindl. Paxt. Fl. G. II. tb. 48. pag. 51.

Pseudobulbis elongatis sulcatis monophyllis, foliis undulatis oblongis obtusis emarginatis, floribus solitariis e spatha maxime enatis, sepalis lanceolatis petaloideis, petalis oblongis undulatis quater latioribus, labello oblongo emarginato subundulato basi cucullato laevi.

This is the Cattleya mentioned in Hartwegs Journal (J. of Hort. Soc. I. 185.) as having been found near Tepic beyond which that miserable document *) gives no information. — Lemaire l. c. 161.

g. Lemonianum.

Cattleya Lemoniana Lindl. Bot. Reg. 1846. t. 35.

Pseudobulbis brevibus fusiformibus, foliis brevioribus; foliis aequilateris obtusis; spatha nulla (?); sepalis anguste lanceolatis acutissimis, apice subherbaceis; petalis maximis tenuibus, valde undulatis, labello anguste convoluto, pone apicem tantum in limbum convexum, parce undulatum margine erosum reflexum nullo modo crispum expanso.

Crescit in Brasilia.

h. Lüddemannianum.

Huc: *Cattleya Lüddemanniana* Rchb. fil. Xenia I. pag. 29.

Aff. C. labiatae tepalorum cuneo basilari brevissimo, lamina subae-

*) Sic!

quali oblongoligulata obtusa labello paulo longiori, undulata, apice obtuse truncata; labelli cuneo basilari quam in Cattleya labiata duplo longiori, lamina ligulata pandurata, dimidio anteriori apice bilobo denticulata, undulata, plus duplo longiori, quam lata.

Flores rubro purpurei, maximi forsan generis.

9. EPIDENDRUM MAXIMUM Rchb. fil. MSS. Huc: *Cattleya maxima* Lindl. G. et Sp. Orch. B. Reg. XXX. 1844. sub 5:

Caulibus obovato clavatis angulatis, foliis 1—2 ovato oblongis, spatha pedunculo multo breviore, sepalis lineari-oblongis obtusis, petalis subrotundo-ovalibus undulatis membranaceis, labelli maximi crispi oblongi obsolete trilobi lobo medio undulato alte emarginato, disco laevi.

Guayaquil and Colombia. — Fine specimens and live plants brought home by Mr. Hartweg shew this to be a rival of C. labiata. — Its flowers are as large, and are described as being of beautiful dark pink. — B. Reg. 1846. tb. 1. — Pl. Hartwegianae 1844: Flores 3 tantum adsunt, pulcherrime violacei. Ad Rio Grande de Malacotes. Journ. Ht. soc. 1846. p. 64. — Flowers 7 inches across, two. Mr. Hartweg obs. 4—5 in a cluster.

cc. Lobi laterales submediani, lobus medius tota sua latitudine sessilis nec dilatatus. Labellum circa columnam volutum.

10. EPIDENDRUM FORBESII Rchb. fil. MSS. Huc: *Cattleya Forbesii* Lindl. Coll. Bot. t. 37. in textu. — Bot. Reg. tb. 933. LO. 117.:

Caulibus elongatis teretibus, foliis geminis oblongis, sepalis petalisque lineari oblongis subaequalibus, labelli trilobi lobo medio cordato subrotundo ovato argute dentato undulato apiculato, lateralibus minoribus rotundatis planis, lineis quaternis elevatis pone basin lamellaque membrananacea utrinque, columna basi lineis quinis elevatis, quarum duae majores, cristata, clinandrii cardine tuberculo corrugato aucto.

Brazil. Flowers greenish yellow. Lip with bright orange brown veins. Very near C. Loddigesii. — Bot. Mag. 3265. — „Cattleya in compliment to William Cattley Esq. of London, an eminent cultivator of plants and patron of Botany.“ Introduced to the gardens at Chiswick by their collector Mr. Forbes. Flw. June 32. Lond. Journ. I. 1842. p. 189: on low trees and on rocks, common; generally near the sea. July. Gardener 128.

11. EPIDENDRUM LODDIGESII Rchb. fil. MSS. Huc: *Cattleya Loddigesii* Lindl. Bot. t. 37: Bot. Reg. XXX. 1844. sub 5: (exclusis cit. C. intermediae Grah. et intermediae pallidae). LO. n. 5. Hook. Bot. Misc. t. 186. Epid. violaceum Lodd. Bot. Cab. 337. Cattleya ovata Lindl. Bot. Reg. 1919.

Caulibus elongatis teretibus, foliis 2 ovato-oblongis, spatha brevi membranacea, sepalis oblongis lateralibus falcatis, petalis subconformibus, labelli lobis lateralibus rotundatis intermedio dilatato crispo $2^1/_2$ longioribus, lineis pluribus clavatis lamellatis pone basin versus apicem evanescentibus.

Brazil and Buenos Ayres. — Flowers some times clear lilac with a whitish lip, sometimes nearly white with a crimson lip, with many intermediate gradations. It always appeared doubtful, whether C. intermedia could be distinguished, and more experiance in estimating the value of characters among these plants leads to the conlusion, that C. ovata must also be reduced to the same species. It seems to be very common in Brazil and to occur as far south as Buenos Ayres. Mr. Gardner found it on trees in marshes at the foot of the Organ mountains (n. 5635 of his herbar). — The size of the leaves is much affected by situation; in all cases however they seem to be broader at the base, than at the point. So far as the charact. of Count Hoffm. C. Vestalis can be judged of, that plant is the pale C. intermedia.

Huc: *Cattleya ovata* Lindl. B. Reg. 1819:

Foliis binis ovatis obtusis caule cylindraceo longioribus (?), sepalis

petalisque lanceolatis acuminatis, labello nudo trilobo laciniis lateralibus apice intermediaque oblonga obtusa denticulatis undulato crispis.

St. Catherine's Brazil (M. Hinds). — In the way of Cattleya labiata. — Bot. Reg. XXII. 1836. sub 1919.

Huc: *Cattleya maritima* Lindl. B. Reg. XXII. 1836. sub 1919.

Foliis binis ovalibus obtusis spatha parum longioribus, caule subclavato, sepalis oblongis acutis, petalis lanceolatis falcatis obtusis, labello trilobo (nudo?); laciniis lateralibus erectis rotundatis, intermedia dilatata denticulata emarginata.

Sea-beaten rocks, Buenos Ayres (Tweedie herb. Hook.). Flowers fine, rosecoloured usually in threes; many var. (?). Its small leaves sufficiently mark this, of which I have only seen one specimen with a single flower. — *Bot. Reg.* XXX. 1842. sub 4: Dwarf habit, one flowered peduncles. Possibly it is one of the many var. of C. Loddigesii.

12. EPIDENDRUM CITRINUM Rchb. fil. Mss. Huc: *Cattleya citrina* Lindl. Bot. Reg. XXX. 1844. sub 5.

Caulibus ovatis squamis laxis albis membranaceis vestitis, foliis lanceolatis glaucis, pedunculis longissimis solitariis, floribus carnosis pendulis, sepalis oblongo-ellipticis, petalis conformibus paulo latioribus, labelli trilobi lobo intermedio ovato undulato emarginato linea media lata elevata.

Mexico. — A mountain plant remarkable for its rich clear yellow flowers which are very sweetscented. — Bentham Pl. Hartweg. 72. fasc. 1. 1839. — In montib. Oaxacae Hartweg Mex.

Hook. B. Mag. 1840. 3742:

Bulbis ovatis diphyllis, foliis ligulato-lanceolatis acutis enerviis glaucis, pedunculo unifloro, perianthio carnoso erecto, sepalis oblongo-ellipticis, petalis elliptico-obovatis, labello perianthium paulo columna plusquam duplo superante trilobo linea media lata elevata, lobo medio ovato acuto undulato.

Pescatorea I. t. 9.

13. EPIDENDRUM HARRISONIANUM Rchb. fil. (non Harrisoniae?). Huc: *Cattleya Harrisoniana* (Batem. in litt.). — Bot. Reg. XXII. 1836. 1919.

Foliis anguste lanceolatis, racemo 1—4 floro, sepalis petalisque patentibus his subrotundo ovalibus, labello subtrilobo verrucoso.

Brazil. Mr. Harrison. — Very near C. Loddigesii. — Bot. Reg. XXX. 1844. sub n. 5. — I only know this plant from 2 flowers given me by Mr. Batemann. They have much shorter and broader sepals than C. Loddigesii, the petalis are much broader and the proportion between the middle lobe of the lip and its lateral lobes is quite different. Besides which certain elevated lines run all the way from the base to near the apex of the lip. The flowers are lilac, the tip with a deep blotch within the margin. — Parad. Vind. fasc. 7. — *Cattleya Papeyansiana* Morr. Ann. Gand. 1845. n. 2. Tab. 5.

Obs. Nescio quae sit sequens planta; sed videtur esse C. Loddigesii seu praecedens.

Bot. Reg. XXIX. 1843. *Misc.* 122: *Cattleya Arembergii* Scheidw. Gartens. 1843. p. 100.

Sepalis lateralibus falcatis obtusiusculis, supremo lanceolato, petalis latioribus undulatis, labelli trilobi lobis undulato-crispis intermedio margine lilacino lamina lutea, lateralibus margine lutescentibus, spatha herbacea compressa obtusa, pseudobulbis cylindraceis nitidis, foliis ovatis carnosis, obscure viridibus.

Caulis 8" alt., fol. 4" long. 2" lata, flores inodori. — Beautiful green ovate leaves, great lilac flowers. Brasilia. — Aremberg collect. — Bot. Reg. XXX. 1844. sub 5: It

is said to bear much resemblance to some other, but to be distinguished by its beautiful dullgreen ovate leaves, and its great lilac flowers. The stem is said to be 9 inches high, the leaves 4 inches long, and 2 inches broad. The flowers sweetscented. It may be C. Harrisoniana or maritima, but it seems to be distinct.

c. Labellum trifidum (circa columnam volutum).

14. **EPIDENDRUM VIOLACEUM** Rchb. fil. MSS. *Cymbidium violaceum* H. B. Kth. Huc: *Cattleya superba* Schombgk. B. Reg. XXV. 1839. Misc. 48.

Caulibus clavatis sulcatis, foliis ovato-oblongis obtusis coriaceis marginatis caule clavato brevioribus, sepalis oblongis acutiusculis, validis, petalis lanceolatis acutis membranaceis duplo latioribus, labelli trilobi cucullati lobis lateralibus acutis; lobo intermedio transverso plano denticulato emarginato subunguiculato basi venis elevatis rugoso; callis duobus pone basin.

Sert. Orch. t. 22. — This magnificent sweetscented Cattleya has been found in British Guayana by Mr. Schomburgk, who sent a live plant of it to Msr. Loddiges, and a drawing to the Linnean Soc; by permission of which a figure has been published in the Sert. Orchid. The flowers if not so large as those of Catt. Mossiae, are from the richness of their colours, inferior to none in beauty. According to Mr. Schomburgk the plant appears peculiar to the 3 rd. or 4 th. degree of N. Lat; it is not to be met with in the Essequibo north of the mouth of the Rupunoony; from thence it is found southwards on trees, which skirt the banks of the brooks and rivers which meander through the Savannahs. He discovered only a few solitary specimens in the Essequibo south of the Cayuwini, and none at the equator. The Caribees call it Oponopodoli, or Ducksmouth, the Macoosees Masame. It is very fragrant, the odour in the morning is said to become too powerful in a confined place; the splendid flowers last from 3—4 weeks. — Although only now brought into notice, the species was many years since discovered by Dr. v. Martius, who found it near Taruma on the banks of the Rio Negro, in woods at the Barra de Rio Negro and forests near Para. It is readily distinct from all previously described species by its three-lobed lip with acute lateral segments, the middle lobe being flat, toothletted and emarginate, and by the cluster of elevated veins at the junction of the epichil and hypochil. *Flowers* deep rose colour, sweetscented, with a deep crimson lip. — Bot. Reg. XXX. 1839. Misc. 47.

L. Sert. 22. 1839: Catt. Schomburgkii Lodd. Lindl. Paxt. Fl. Garden. I. p. 6. — Stem narrow at the base, increases in diam. upwards, it is however seldom more than 2 inches in circumference, when young it is covered with sheathes resembling the spatha. Spathe large foliaceous. Sepals fleshy. Petals wavy.

Lond. Journ. II. 1843. p. 672: on trees along the Essequibo, north of the Rupunoony. Schomb. 699. — Van Houtte Flore de Serres IX. 926.

15. **EPIDENDRUM ISABELLA** Rchb. fil. MSS. Huc: *Cattleya Isabella* Rchb. fil.

16. **EPIDENDRUM SCHILLERIANUM** Rchb. fil. MSS.: Huc: *Cattleya Schilleriana* Rchb. fil.

17. **EPIDENDRUM INTERMEDIUM** Rchb. fil. MSS. — *Cattleya intermedia* Grah. B. Mag. 2851. B. Reg. XXII. 1919. Huc: *Cattleya amethystina* Lem. — Lem jard. fl. tab. 379.:

Pseudobulbis elongatis subgracilibus articulato-sulcatis cylindraceis vaginatis, squamis vaginantibus scariosis applicatis striatis ap. acutis; foliis binis oblongo-lanceolatis amplis emarginatis coriaceo-crassis striato-venosis; spatha brevissima subscariosa punctulata; racemo subtrifloro (v. amplius) pedunculo purpureo-punctato; pedicellis ovarianis pedunculum aemulantibus versus apicem inflatis, bractea acuta minima; floribus maximis albido-lilacinis, segmentibus subaequalibus subconformibus, lateralibus externis falcato-deflexis; labello maximo recurvato, lobis se tubuloso-involventibus, mediano maximo deflexo undulato plicato emarginato denticulato intense violaceo.

Lem. ad figuram! reliqua desiderantur.

Cattleya amethystina Morr. Ann. soc. roy. d'agric. et de bot. Gand. IV. pl. 201. p. 217.

Revera species non genuina, sed forma altera ex formis Cattleya Loddigesii Lindl. coll. bot. t. 37: sicut et C. intermedia Grah. bot. mag. 2851. C. vestalis Hoffmannsegg; C. Papeiansiana Morr. ibid. I. pl. 5.

C. candida hort. caet.

C. Loddigesii var. *amethystina*, in nomencl. bot.

In insula St. Catharina 1848 detecta.

18. EPIDENDRON AMETHYSTOGLOSSUM Rchb. fil. *Cattleya amethystoglossa* Lind. Rchb. fil.

19. EPIDENDRUM GRANULOSUM Rchb. fil. MSS. Huc: *Cattleya granulosa* Lindl. Bot. Reg. XXVIII. 1842. 1.

Caulibus teretibus gracilibus diphyllis, foliis oblongo-lanceolatis obtusis, sepalis oblongis obtusis, petalis obovato-spathulatis undulatis obtusissimis, labello cucullato tripartito: laciniis lateralibus semiovatis intermedia sinu lato divulsa ungue aequilateri laevi lamina dilatata rotundata plicata granulosa denticulata.

Hartweg leg. in Guatemala. — Labellum extus album, medium intus flavum et purpureo granulosum. Folia 5 perigonii viridia brunneo punctata. — Bot. Reg. XXX. 1844. sub. 5. This has a slender stem, terminated by two narrow leaves, something like those of C. bicolor, but shorter. Sepals two inches and a half long, oblong, olive green, mottled with rich brown spots. Petals obovate, very much rounded at the point, and narrowed to the base; wavy at the margin and of the same colour as the sepals. Strongly contrasted with the dingy colours of these parts is the lip, of a pure white at the sides and points and of a glorious orange spotted with crimson in the middle; its lateral lobes curve over the column, but are divided deeply from the middle lobe by a wide slit; the middle lobe itself has its surface broken up into numerous granulations. Something in the way of C. guttata. It is scarcely possible that the plant fig. in the Bot. Mag. as a variety of C. guttata (Russelliana) is this species. The Brazilian origin attributed to it is no doubt erroneous, like that of many plants from the Woburn collection.

20. EPIDENDRUM ELATIUS Rchb. fil. MSS. Huc: *Cattleya guttata* Lindl. Bot. Reg. 1406. Orch. n. 10. Hort. Trans. 2 ser. 2. t. 8. — *C. elatior* LO. n. 9. founded upon a bad tall guttata cf. Sert. t. 23.

Caulibus elongatis teretibus, foliis 2 oblongis concavis basi paulo angustatis, spatha brevi, floribus carnosis, sepalis lineari-oblongis acuminatis, petalis conformibus paulo latioribus undulatis, labelli trilobi lobis lateralibus ovatis: intermedio cuneato bilobo disco tuberculato.

Brazil. — Flowers greenish yellow, beautifully spotted with crimson; lip white with a lilac tip. Raceme sometimes as large as a man's head. — Bot. Reg. XXX. 1844. sub. 5. — Alias C. elatior Lindl. Orch. 9. C. sphenophora Morr. Ann. Gand. 175.

Cattleya guttata Lindl. var. *Leopoldi* Lind. et Rchb. fil. Pescatorea 43.

Cattleya Leopoldi „a mere var. of *Cattleya granulosa*" Lindl. Paxt. fl. G. II. 129.

var. *Russeliana*.

Huc: *Cattleya granulosa* var. *Russeliana* Lindl. Bot. Reg. XXXI. 1845. 59.

Foliis ovatis, pedunculis trifloris, floribus multo majoribus, petalis magis lanceolatis, labelli ungue angustiore.

Sent to Sir W. Hook. as a Brazil Orchid. At Syon said to have been rec. from Mr. Wallich, but it is surely a fine var. of the Guatemala C. granulosa. — The large membranous, great erect flowers, long lip spread out at the point into a broad transverse plate are different from the same parts in the smaller resupinate flowers of Cattleya guttata. — B. M. 3693. (N. S. XII.)

Cattleya guttata Lindl. β. *Russelliana.* — Parad. Vind. f. 8. Van Houtte Fl. des Serres III. t. 199. — Ann. de la Soc. d'hortic. de Gand. II. 187. t. 103.

Bot. Mag. 3693.: *Cattleya guttata.*

(β) *Russelliana;* elata; floribus subtriplo majoribus sepalisque intense fusco viridibus. (Tab. nostr. 3693.)

Brought to the Woburn Collection from Brazil in the spring of 1838, by Capt. Lord Edward Russel R. N. then commanding H. M. S. Acteon. It was given to that nobleman by the Director of the Botanic Garden at Rio with the information, that it was one of two specimens that had recently been discovered in the Organ Mountains. In Aug. of the same year its lovely flowers were displayed, when the drawing here represented was made on the spot. Widely as the inflorescence differs in size and colour from Dr. Lindley's C. guttata above quoted, it cannot be considered otherwise, than as a beautiful and stately variety, worthy of a place in every choice collection. — Labellum roseum, lobo medio kermesino; perigonii phyllis viridibus brunneo adspersis.

Obs. Species incognitae: Cattleya granulata, the Leopold var. Gardeners Chronicle 1851. 471. (pro granulosa?). Cattleya Quindois? G. Chronicle 1853. 247. (pro from Quindiu?). Cattleya ianthina G. Chronicle 1853. 247. (= intermedia?). Cattleya piperita G. Chronicle 1850. 168. Cattleya tuberculata G. Chronicle 1850. 168. Cattleya violacea G. Chronicle 1841. 453. Cattleya Harrisoniae G. Chronicle 1851. 453.

d. Labellum longe cuneatum, antice quadrilobum, s. trilobum, a columna liberum.

21. EPIDENDRUM CAMPYLOSTALIX Rchb. fil. in v. Mohl et Schlechtendal B. Zeitg. 1852. pag. 730.

Pseudobulbo „oblongo ancipiti", apice attenuato, folio unico oblongo acuto basi attenuato, magno, spatha apice lanceolata, dorso carinata, scariosa, tripollicari, pedunculo paniculato, folium paulo excedente, valido, ramis vaginis lanceis scariosis suffultis, bracteis lanceolatis, acutis, scariosis, ovaria prismatica pedicellata aequantibus seu superantibus, perigonii phyllis externis lanceolatis acuminatis, lateralibus internis subaequalibus, angustioribus, basi cuneatis, labello liberrimo longe cuneato, medio dilatato, trilobo, lobis lateralibus rotundatis, lobo medio obovato, producto, retusiusculo, ungue superne incrassato, tumore inter lobos laterales antice in carinulas tres excurrente, gynostemio retrorsum incurvo, androclinii limbo trilobo, lobis lateralibus triangulis retusis emarginatis, medio crasso, semitereti, retuso, tabulam proferente (11)

Blüthenstiel schwarzpurpurn; Hüllblätter aussen blass, innen tief-purpurn; Lippe weiss. Costa Rica und Chiriqui.

Huc: Lindl. l. c. n. 2:

E. pseudobulbo oblongo ancipiti, folio solitario oblongo acuto, spatha lanceolata pedunculo breviore, panicula folio subaequali vaginis bracteisque lanceolatis ovariis aequalibus scariosis squamata, sepalis lanceolatis acuminatis, petalis angustioribus, labello tricarnato medio dilatato trilobo: laciniis lateralibus rotundatis intermedia obovata, columna recurva, clinandrii appendice „semiterete tabulam proferente!!"

Wild in Veragua and Costa Rica — Warczewitz. — Leaf large. Flower stem dark purple. Sepals pale, petals dark-purple, lip white. — Rchb. This is surely an a Epicladium, on account of its spathes, and not an Encyclium, to which sub-genus it is referred by M. Reichenbach.

WALPERS.

ANNALES BOTANICES SYSTEMATICAE.

TOMI SEXTI

FASC. III.

AUCTORE

DR. CAROLO MUELLER BEROL.

LIPSIAE.

SUMPTIBUS AMBROSII ABEL.

1862.

1 Thlr. 6 Ngr.

Jede Zusendung oder Bemerkung die Annales botanices systematicae betreffend wird von dem Herausgeber mit größtem Danke aufgenommen und unte[r] … Dr. C. Müller in Berlin, Schöneberger Ufer No. 39 erbeten.

§ 2. *Encyclium.* Lindley, in Hooker's Journal of Botany, III. 81; Bot. Reg. 1842, misc. q. 28. Encyclia, Hooker, in Bot. Mag., t. 2831.

The lip in this sub-genus never has free calli, but, if marked with processes of any kind, usually presents them in the form of a pair of raised lines or ribs, which either converge towards the base of the lamina, or become completely confluent into a kind of cushion. It is this peculiarity which has led to the admission of E. naevosum here instead of among Amphiglottis.

ANALYSIS OF THE SECTIONS.

Labellum integerrimum . . . . A. *Holochila.*
„ apice ipso tridentatum, carnosum . . . . B. *Sarcochila.*
„ trilobum: lobo medio membranaceo;
lobis lateralibus rotundatis, intermedio subconformi, nec majore . C. *Sphaerochila.*
„ „ angustis, intermedio difformi saepius multo majore D. *Hymenochila.*
a. lobus intermedius acutissimus v. acuminatus.
b. „ „ obtusus
* rachi laevi.
* * rachi aspera.
c. „ „ manifeste bilobus.

A. HOLOCHILA.

22. EPIDENDRUM VITELLINUM. LO., p. 97; Bot. Reg. 1840, t. 35; Sert. Orch., t. 45; Bot. Mag., t. 4107. Huc Lindl. l. c. sub n. 4.:

E. pseudobulbis ovatis acuminatis diphyllis, foliis oblongo-ligulatis acutis basi vaginantibus racemo erecto multifloro brevioribus, sepalis petalisque ovato-lanceolatis acutis subaequalibus patulis, labello lineari apice angustato abrupte acuto infra medium callosum bifoveato semilibero.

Wild in Mexico; Oaxaca, on oaks at the height of 5 — 6000 feet — Galeotti, 5104: Xalapa — Coulter; Guatemala, on cloudcapped mountains, amidst continual mists, in the regions of Lichens and Jungermannias — Skinner; the Cumbre of Tetontepequé, 9000 feet above the sea — Hartweg (v. v. c. et s. sp.). — Bears flowers of a brillant orange in many-flowered erect spikes. A magnificent species very difficult of cultivation. — Lemaire ill. hortic. tb. 4. Van Houtte Flore des Serres X. 1026.

23. EPIDENDRUM NAEVOSUM Lindl. sub n. 6.:

E. pseudobulbis fusiformibus membranis laxis vestitis, foliis ovalibus pergameneis supremo tantum persistente, scapo filiformi flexuoso squamis adpressis vaginato apice 3—5-floro, floribus membranaceis nutantibus, sepalis petalisque linearibus acuminatis secundis, labello ovali linea media aspera venisque divergentibus varicosis, callo baseos excavato, cuniculo ventricoso.

Wild in Mexico; in the province of Oaxaca, at the elevation of 4000 feet, on the Pacific side — Galeotti, 5330, (v. v. c. et s. sp. comm. cel. Galeotti.) — A small species, scarcely six inches high. The leaves are about three to a pseudobulb, but two fall off early, giving the plant the appearence of an Encyclium; nevertheless, it may be almost regarded as an Amphiglott, related to E. antenniferum. A plant that flowered some years since with Mrs. Lawrence had white sepals and petals, a crimson anther, and a yellow lip richly dotted with crimson.

24. EPIDENDRUM BRASAVOLAE Rchb. fil. in Mohl et v. Schlechtendl. Bot. Zeitg. 1852. p. 729. Oct. 13.

„Pseudobulbis obpyriformibus, foliis oblongis acutis, inflorescentia bipedali — tripedali" (panicula?), pedunculo teretiusculo, valido, bracteis triangulis, acutis, valde abbreviatis, ovariis teretiusculis, pedicellatis

multo brevioribus, perigonii phyllis lineari-lanceolatis, brevibus, acuminatis, coriaceis, labello usque ad basin libero, basi unguiculato ligulato, dein in laminam obtuse rhombeam, apice acuto acuminatam dilatato, linea media a medio labello ad apicem elevata, elevatione marginibus extrorsis plicosa, depressa, in basi partis anterioris rhombeae (more Lockhartiae [Fernandeziae] parthenocomos), androclinii lobis lateralibus oblique truncatis, lobo medio spatulato, fimbriato, postice carinato, antheram longe superante.

„Blüthen gelb mit braunviolett. Lippe gelb, an Spitze purpurn." Sie sind denen der Brasavola Perrinii gleichgross. Ohne Untersuchung der Anthere könnte man meinen, eine Blüthe aus dieser Gattung vor sich zu haben. Chiriqui Vulcan. 8000'. Warscewicz. Lindl. l. c. sub n. 7.:

E. pseudobulbis obpyriformibus, foliis oblongis acutis, floribus paniculatis (?), sepalis petalisque brevibus acuminatis coriaceis, labello obtuse rhombeo acuminato: linea media elevata sinuata, clinandrii lobo medio spathulato fimbriato elongato.

Wild in Veragua, on the volcano of Chiriqui, at the height of 8000 feet — Warczewitz. — Flowers the size of Brasavola Perrinii, yellow and brown violet; lip yellow purple at the point. Would not be taken for an Epidendrum without an examination of the anther. — Rchb.

25. EPIDENDRUM PRISMATOCARPUM Rchb. fil. in v. Mohl et v. Schlechtendl. Bot. Zeitg. 1852. p. 729. Oct. 13.:

„Habitu praecedentis", pedunculo elongato, inferne calamum anserinum crasso, superne multifloro, nunc apice flexuoso, bracteis triangulis, valde abbreviatis, quam ovaria pedicellata, prismatica abbreviato-triptera multo brevioribus, perigonii phyllis ligulato-lanceolatis acutis coriaceis, labello prope libero basi unguiculato ligulato, utrinque sub fovea stigmatica obtuse auriculato, dein breviter lato-ligulato, subito cordato-acuminato, crista antice bicruri inter auriculas, disci linea lanceolata apicem usque acuminata incrassata, alis androclinii lato-rhombeis, ala media quadrata, tridentata, lateralibus subbreviore.

Aehnlich vorigem. Kleinblüthiger. „Lippe braun punctirt." Chiriqui. v. Warscewicz. — Lindl. l. c. sub n. 23. (Sphaerophila):

E. pedunculo elongato multifloro, ovario abbreviato triptero, sepalis petalisque ligulato-lanceolatis acutis, labello unguiculato cordato acuminato utrinque obtuse auriculato, crista bicruri linea interjecta lanceolata, clinandrii appendice quadrata tridentata.

Wild in Veragua, on Chiriqui — Warscewitz. — Flowers small, lip brown dotted. — Rchb.

26. EPIDENDRUM FUSIFORME Rchb. fil. MSS. — *Isochilus fusiforme* Lindl. MSS. Herb.

Pseudobulbis longe stipitatis fusiformibus oligophyllis, foliis lineari-ligulatis cum apiculo, floribus solitariis nutantibus, sepalis tepalisque ligulatis acutis, labello flabellato retusiusculo.

Ex hort. Colvill.

27. EPIDENDRUM POLYBULBUM Sw. — Huc: *Dinema polybulbum* Lindl.

28. EPIDENDRUM SUBAQUILUM Lindl. Bot. Reg. 1846. sub t. 64. Lindl. l. c. sub n. 8.:

E. pseudobulbis ovatis monophyllis caespitosis, foliis linearibus oblique emarginatis obtusis scapo glabro filiformi subpaniculato aequalibus, sepalis petalisque linearibus dorsali ascendente lateralibus parallelis, labello semilibero ovato-lanceolato indiviso lamellis 3 spongiosis ante medium convexum.

Wild in Mexico or Guatemala — Warner (v. v. c.) — A small slender plant, with leaves seven or eight inches long, and barely three lines wide. Flowers dull brown with a whitish lip.

29. EPIDENDRUM DISTANTIFLORUM Rich. et Galeotti Orch. Mex. t. 7. Lindl. l. c. sub n. 9.:

E. „pseudobulbis globosis parvulis 2—3-phyllis, foliis lanceolato-linearibus, floribus pallide luteis, panicula laxa ramosa, sepalis linearibus, labello ovali-lanceolato acutissimo."

Wild in Mexico — Galeotti.

30. EPIDENDRUM LIGULATUM La Llave. LO. p. 98. Lindl. l. c. sub 10.:

E. pseudobulbis ovatis compressis, foliis lanceolatis subcoriaceis striatis, scapo filiformi, floribus alternis resupinatis, sepalis petalisque ligulatis reflexis, labello obcordato limbo subcrenato, capsula glabra trigona.

Wild in Mexico, on the Irapaeen mountains — La Llave. — Flowers purplish brown with a yellowish dotted lip. Possibly this obscure plant may be more nearly related to E. glaucum.

31. EPIDENDRUM PUNICEUM Rchb. fil. MSS. *Alamania punicea* Llave LO. 153. Benth. Pl. Hartw. 72.: Monte de Jaline Mexici. Hartweg.

32. EPIDENDRUM TRIPUNCTATUM Lindl. B. R. 1841. Misc. 148. Huc: Lindl. l. c. n. 12.:

E. pseudobulbis ovalibus diphyllis, foliis ligulatis tenuibus apice recurvis scapo bifloro pluries longioribus, sepalis patentissimis lineari-oblongis, petalis duplo angustioribus, labello semiadnato obovato rugoso utrinque ultra columnam emarginato, columna atropurpurea apice triloba et luteo tripunctata.

?? *E. Ghiesbreghtianum* Richard and Galeotti, Orch Mex. n. 31.

Wild in Mexico — Galeotti. (v. v. c.) — This has long grassy leaves, and a very short scape. The sepals are twice as broad, and much larger than the petals and a dull yellow green. The column is deep purple, with three minute lobes, each tipped with a pale orange spot. The lip is pale citron rather more than half an inch long, not warted, and distinctly emarginate near the apex of the column.

33. EPIDENDRUM AURITUM Lindl. in Bot. Reg. 1843. Misc. 4. Huc: Lindl. l. c. n. 13.:

E. pseudobulbis elongatis compressis squamis vaginatis, folio angusti ligulato obtuso, racemo 3—4-floro folio breviore, bracteis cartilagineis spathaceis internodiis longioribus, sepalis lineari-lanceolatis acutis recurvis, petalis conformibus duplo brevioribus erectis, labello linear-convexo arcuato medio carnoso foveato rugoso, columna apice tridentata, anthera utrinque auricula simplici bifida subulata aucta.

Dinema paleaceum Lindl. in Bot. Reg. 1840. Misc. 112.

Wild in Mexico; Vera Cruz, on oaks at the height of 6000 feet — Galeotti. 5144; Linden 210; Guatemala — Skinner. (v. v. c. et s. sp.) — Flowers very sweet-scented, like Heliotrope, pale green or almost white, with no spot or stain, except a violet blotch at the base of the lip. A peculiar feature is the presence of one or two fine pointed horns on each side the anther, which thus, when seen in front, presents the appearance of some insect's head.

Huc: *Epidendrum Lindenianum* Rich. et Galeotti Orch. Mex. n. 42. Lindl. l. c. sub n. 88.:

E. „pseudobulbis oblongis 1-phyllis, folio oblongo-lineari obtuso, scapo terminali, floribus luteis, racemo 4—5-floro, labello libero subspathulato obtuso."

Wild in Mexico — Galeotti.

Huc: *Dinema paleaceum* Bot. Reg. 1840. XXVI. Misc. 112.

Pseudobulbis ovalibus compressis monophyllis, foliis ensiformibus obtusiusculis planis, spica pauciflora longioribus, bracteis lineari lanceolatis acuminatis paleaceis ovario lentiginoso brevioribus, floribus secun-

dis, sepalis petalisque lineari-lanceolatis patulis, labello petalis aequali et subconformi carnoso apice dilatato per medium sulcato.

Guatemala. Bateman. — Pale straw-coloured flower of little beauty and is only interesting as confirming the goodness of the genus Dinema, whose character however depends upon the number of pollen straps being 2, not 4, as in Epidendrum, the horn-like processes of the column are apparently only of specific value.

34. EPIDENDRUM LUTEOROSEUM Rich. et Galeotti Orch. Mex. n. 32. Huc Lindl. l. c. n. 14.:

E. „pseudobulbis ovoideo-oblongis parvulis, caule 2—3-phyllo, floribus parvulis luteo-roseis paniculatis, labello albido-violaceo obovali-obtuso emarginato 5-nervio glanduloso."

Wild in Mexico — Galeotti.

35. EPIDENDRUM FLABELLATUM Lindl. Huc: Lindl. l. c. n. 15.:

E. pseudobulbis ovatis basi subangulatis diphyllis, foliis coriaceis ligulatis carinatis acutis, scapo ramoso glabro, sepalis patentibus oblongis obtusis, petalis magnis cuneatis, labello semilibero cucullato flabellatim cuneato crispo: callo elevato pubescente obovato medio depresso apice tridentato.

Wild in Mexico — Harris (v. v. c.) — A plant with the habit of E. asperum, with which I once incautiously confounded it (Bot. Reg. 1838. Misc. 36). It differs in its undivided lip, and smooth, not scabrous, rachis. Flowers the size of E. odoratissimum, dull yellowish brown; lip yellow, with well-defined crimson veins and a white callus.

36. EPIDENDRUM SANGUINEUM Sw. Prodr. 124. *Broughtonia sanguinea* R. Br. — Bot. Mag. 3536. (X. N. S. 86).

(β) foliis longioribus, petalis angustioribus. B. sg. Hook. B. M. t. 3076.

This is the usual state of the plant, but I cannot but consider 3076 as variety. — Though introduced to Kew from Jamaica since 1793, it appears to be yet a rare plant in our gardens. Bloss. Mai, Juni. — Hook. Lond. Journ. III. 526: Jamaica Purdie.

37. EPIDENDRUM NONCHINENSE Rchb. fil. MSS. *Broughtonia Chinensis* Lindl. MSS. — Hook. Lond. Journ. 1842. p. 492.

Caule brevi carnoso diphyllo? foliis lanceolatis patentibus carnosis, racemo terminali, multifloro, pedunculo elongato aphyllo arcto vaginato, bracteis membranaceis lineari-lanceolatis pedicellis brevioribus, labello obovato cucullato membranaceo venoso: venis flabellatis omnibus basi cristatis (Lindley).

It is perhaps not very surprising, that an American genus should occur upon one of the most westerly points of Asia; yet it is a circumstance so striking as to demand strict investigation before it can be accepted as true. It does not, however, appear possible to doubt it in the case of this Broughtonia, which, although in an indifferent state of preservation, indicates all the main features of the genus to which I have referred it. It is unquestionably Epidendreous, as is distinctly shown by its well preserved pollenmasses. It is equally certain that no Asiatic genus of that part of the Orchidaceous order will contain it. The only doubt that I entertain respecting it, is, whether to place it in Barkeria or Broughtonia. The habit is more that of the former than of the latter; but it has the adnate spur belonging to the labellum of Broughtonia, and it has not, as far, as I can discover, the peculiarly deflexed dorsal sepal of Barkeria. Its lip too is distinctly cucullate after the manner of a Laelia. (Lindley in enum. of the plants collected in Hong Kong by Mr. Hinds descr. by Bentham in Hook. Lond. Journ. 1842. p. 492. — Laeliopsis c. Lindl. in Paxt. Fl. G. III. 105.

Obs. Mihi ipsissima planta pluries ex America centrali in manus venit, unde lapsus Hindsii, qui etiam in America centrali plantas legit, facile conjiciendus.

38. EPIDENDRUM CUBENSE Lindl. — Bot. Reg. XXX. 1844. p. 17. Misc. 24.

Pseudobolbis teretibus elongatis, foliis rigidis horizontalibus subaequilongis anguste ovalibus scapo debili paucifloro duplo brevioribus, bracteis minimis, sepalis petalisque conniventibus linearilanceolatis, labello obovato apiculato lineis 3 ramentaceis in medio, clinandrio glabro.

A Cuba plant, rare, delicate and beautiful. Imported by Mrs. Loddiges. The pseudobulbs are 2" long; the scape 6" high; the flowers white, with a lip floded up, white at the end, yellow in the middle, and purple as is the column, near the base. Laeliopsis cubensis Lindl. in Paxt. Fl. G. l. c.

B. *SARCOCHILA* Lindl.

39. EPIDENDRUM GLAUCUM Lindl. in Bot. Reg. 1840. Misc. 56. Huc Lindl. l. c. n. 16.:

E. undique glaucedine obductum, pseudobulbis ovalibus compressis monophyllis, foliis ensiformibus acutis pergameneis basi canaliculatis scapo pendulo paniculato brevioribus, sepalis petalisque ovalibus obtusis, labelli linearis apice carnosi trilobi lobis lateralibus rotundatis intermedio recurvo ovato medio calloso, columnae cardine appendice ovata obtusa recurva aucto, ovario brevi trigono.

Epidendrum brachiatum Richard and Galeotti Orch. Mex. n. 40.

Epithecia glauca Knowles Flor. Cab. II. 167. t. 87.

Prosthechea glauca Ib. II. 111.

Wild in Mexico — Barker: near Oaxaca at the height of 8000 feet — Galeotti, 27 and 28; St. Pedro de Nolasco etc. — Jurgensen, 600. (v. v. c. et s. sp. comm. cel. Galeotti.) — Flowers small, scentless, green, stained with dull purple. M. Galeotti's two numbers 27 and 28 merely indicate differently sized specimens of the same plant.

40. EPIDENDRUM LIMBATUM Lindl. in Bot. Reg. 1843. Misc. 104. Huc Lindl. l. c. 17.:

E. facie E. glauci; sepalis petalisque minoribus subrotundo-ovatis, labelli lobo medio recto, lateralibus subfalcatis, columnae appendice truncata dentata.

Wild in Guatemala — Skinner (v. v. c.). — The habit of E. glaucum, but larger, and the flowers have roundish sepals and petals, like those of E. squalidum. The appendage at the back of the anther is thin, truncate and toothed, not rounded, fleshy and entire. The name alludes to a narrow yellowish border which surrounds the dull purplish brown sepals and petals. It has a slight smell., like that of cobbler's wax.

41. EPIDENDRUM OCHRACEUM Lindl. in Bot. Reg. 1838. Misc. 15. tab. 26. Huc Lindl. l. c. 18.:

E. pseudobulbis obverse pyriformibus caespitosis sursum attenuatis 1—3-phyllis, foliis linearibus acutis recurvis scapo aequalibus, spica terminali laxiflora bracteis ovario aequalibus herbaceis rigidis acutis, sepalis petalisque subaequalibus lineari-oblongis obtusis, labello postico sublibero trilobo: laciniis lateralibus inflexis truncato-rotundatis denticulatis intermedia brevi emarginata: disci callo plano apice tridentato in series tres breves verrucarum procurrente, columna apice tricorni denticulata, clinandrio intra cornua coronula multidentata cincto, ovario triptero.

Wild in Mexico; Hacienda de la Laguna — Schiede, n. 6.; Oaxaca — Loddiges; St. Pedro de Nolasco — Jurgensen 601 and 645; Guatemala — Skinner (v. v. c. et s. sp.) The whole plant not more than nine inches high, with the long narrow pseudobulbs in tufts. Flowers small, orange on the inside, green without. The fringe between the anther and the horns of the column is very remarkable. Is not E. triste the same as this?

42. EPIDENDRUM TRISTE Richard et Galeotti Orch. Mex. n. 38. Huc Lindl. l. c. 19.:

E. pseudobulbis oblongis attenuatis 2-phyllis, fol. lanceolato-lin

ribus acutis, flor. viridibus parvulis pendulis: labello trilobo lobis lateralibus obtusis intermedio multo minori."

Wild in Mexico — Galeotti.

C. *SPHAEROCHILA.*

43. EPIDENDRUM SQUALIDUM Llave. LO. p. 99. Huc Lindl. l. c. 20.:

E. pseudobulbis subancipitibus, floribus racemosis, sepalis petalisque oblongis acutis patulis, labello rotundato trilobo medio crassissimo 3-costato: laciniis lateralibus obtusis intermedia subreniformi undulata.

Wild in Mexico — Karwinski; on the mountains of Valladolid — La Llave (v. s. sp. comm. cel. Bateman.) — Flowers dull yellowish brown, purplish outside. Lip whitish, apparently not cuniculate.

44. EPIDENDRUM PTEROCARPUM Lindl. in Hooker's Journal III. 82. — Bot. Reg. 1841. Misc. 128; 1844 t. 34. Huc Lindl. l. c. 22.:

E. pseudobulbis ovalibus compressis subdiphyllis, foliis ensiformibus acutis, racemo angusto, sepalis petalisque subaequalibus linearibus acuminatis patentibus, labelli subrotundi trilobi cordati laciniis lateralibus rotundatis intermedia multo longiore acuta basi bilineata callo pubescente obscure tridentato aucta, capsula ovata tri-alata.

Epidendrum cinnamomeum Richard and Galeotti Orch. Mex. n. 36.

Wild in Mexico; Oaxaca, on oaks and rocks in the cold region at the elevation of 6—7000 feet — Galeotti 5100. (v. v. c. et s. sp. comm. b. Zuccarini.) — This has a long thin raceme of brown flowers, and a yellow heart-shaped lip streaked with crimson. It is remarkable for the seed-vessel, when ripe; being extended into three broad sharp wings.

D. *HYMENOCHILA.*

α. lobo intermedio acutissimo vel acuminato.

45. EPIDENDRUM DIOTUM Lindl. in Bot. Reg. 1843. Misc. 97. Huc l. c. 24.

E. pseudobulbis ovatis elongatis monophyllis, foliis coriaceis ensatis patulis racemo duplo brevioribus, floribus distantibus, sepalis petalisque obovatis unguiculatis undulatis acutis, labelli obtuse rhombei tripartiti axi elevata carnosa in medio foveata laciniis lateralibus planis erectis rotundatis intermedia rotundata undulata cuspidata parum majore convexa, columna aptera.

Wild in Guatemala — Hartweg (v. v. c.) — Leaves about a foot long, spreading, and very stiff. Raceme about two feet high. Flowers an inch and a half in diameter, of a dull cinnamon colour, with a little yellow and some chocolate veins in the lip. The flowers have a slight odour of Elder leaves. Its name alludes to the appearance of two ears produced by the rounded lateral lobes of the lip ascending and turned towards the front.

46. EPIDENDRUM PACHYANTHUM Lindl. in Bot. Reg. 1838. Misc. 42. Huc Lindl. l. c. 25:

E. pseudobulbis ovatis diphyllis, foliis lato-ligulatis subundulatis apice oblique obtusis dorso rotundatis, sepalis carnosis herbaceis lanceolatis, petalis obovato-lanceolatis apice complicatis, labelli laevis laciniis lateralibus ascendentibus truncatis, intermedia spathulata acuta basi callosa trilineata convexa multo bevioribus, columnae auriculis obtusis.

Wild in Demerara — Schomburgk (v. v. c. et s. sp.) — A large green-flowered species. Leaves thinner and broader than usual among these Epidendra, and a little wavy at the margin. Flowers full two inches in diameter, thick and fleshy, dull green, stained with a dirty reddish brown towards the ends of the sepals and petals.

Lip pale straw-colour, streaked along the middle with violet. Differs from E. selligerum in the petals not being at all unguiculate. Leaves one inch and a quarter broad.

47. EPIDENDRUM SELLIGERUM Bateman in Bot. Reg. 1838. Misc. 66. Huc Lindl. l. c. 26:

E. pseudobulbis 2—3-pollicaribus, scapo subramoso, sepalis patentissimis obovatis concavis obtusis, petalis unguiculatis spathulatis acutis, labello semilibero laciniis lateralibus obtusis recurvis planis intermedia ovata acuta crispatula, disco elevato carnoso medio excavato, anthera biloba terminali, columna aptera.

Epidendrum violodora Galeotti in hb. Hooker.

Wild in Guatemala — Skinner; Mexico, Oaxaca, on rocks and trees, at an elevation of 3000 feet — Galeotti, 5096—7 (v. v. c. et s. sp. comm. col. Hooker.) — Sepals and petals dull dingy purple, lip pale violet. Flowers perfumed like the Tuberose — Bateman; or like violets — Galeotti. See E. ionosmum n. 73.

48. EPIDENDRUM REPLICATUM Lindl. in Paxton's Flower Garden; gleanings 443. ic. 224. Huc Lindl. l. c. 27.:

E. floribus dense racemosis, sepalis obovato-lanceolatis acutis, petalis rotundatis unguiculatis apiculatis, labelli trilobi lobis lateralibus oblongis subtruncatis apice reflexis intermedio longiore crispo rhombeo acuminato lateribus omnino replicatis sinubus apertis, columna aptera.

Wild in New Grenada? — Linden? (v. v. c.) — Racemes closely many-flowered, about 18 inches high. Sepals and petals dull yellow, stained with brown in the middle below the point, but with a yellow border all round; the former oblong-lanceolate and acute, the latter linear below, and then spread out into a circular disc, terminated abruptly by a small point. The lip, which is white streaked with pink, is remarkable for the manner in which the two sides are turned downwards, so that their backs actually touch.

49. EPIDENDRUM AMICTUM Linden Rchb. fil. in Bonpl. III. 219.

Aff. E. Candollii Lindl. labelli gynostemium involventis lobis lateralibus semiovatis abbreviatis apice reflexis, lobo medio obtuse quadrato crispulo apice apiculato, callo medio sulcato antice acuto carnoso in disco in lineas velutinas basin versus exeunte, venis radiantibus labelli omnibus elevatulo carinatis, illis loborum lateralium subevanescentibus.

Pedunculus gracilis spithamaeus apice sexflorus. Bracteae squamas minutas sistentes. Ovaria pedicellata subpollicaria. Sepala spathulata acuta. Tepala basi angustiora dein latiora. Omnia virentia. Labellum purpureo striatum. Gynostemium apterum. Flores illos E. aromatici subaequantes. Cult. in Hort. Lindeniano.

50. EPIDENDRUM CANDOLLEI Lindl. in Bot. Reg. 1839. Misc. 77. De Cand. Pl. rar. Genev. 8 not. p. 15. t. 3. Huc Lindl. l. c. 28.

E. pseudobulbis sphaericis, scapo paniculato, sepalis petalisque obovato-oblongis, labelli liberi trilobi cucullati sinubus clausis lobo medio majori crispo acuminato disco elevato calloso sulcato pubescente.

Epidendrum cepiforme Hooker in Bot. Mag. t. 3765.

Wild in Mexico (v. v. c.) — Flowers dull brown, with a dull yellow lip, striped with the same colour.

51. EPIDENDRUM ONCIDIOIDES Lindl. in Bot. Reg. t. 1623. Huc Lindl. l. c. 29.

E. pseudobulbis subteretibus, foliis 2—3 ensiformibus panicula longa racemosa brevioribus, sepalis petalisque obovatis unguiculatis, labelli trilobi lobis lateralibus angustis obtusis planis intermedio subrotundo cuspidato multo brevioribus, disco tricarinato venis elevatis utrinque, columna apice obtuse auriculata.

(A) Flowers yellow blotched with brown, coriaceous with broader sepals and petals

(B) *graniticum*. Flowers smaller, green dotted with red. Lip white, rose-coloured at the base.

Epidendrum graniticum Lindl. in Hooker's Journal III. 83.

Wild A. in Surinam; savannahs — Focke 237 and 823. B. Surinam — Focke 457; Demerara on the granitic ridges of the R. Corentyn, the Cuyumi and Guayna, among boulders where a little soil has collected — Schomburgk, 195. (v. v. c. et s. sp.: A in herb. Miquel.) — Flowers extremely fragrant. Stem six feet high according to Schomburgk, three to four feet high in gardens. Leaves two feet long and one and a half inch wide. The native country, long unknown, is proved to be Surinam by M. Focke's specimens which I have examined in the herbarium of Profr. Miquel. The green, white, and pink flowers of my E. graniticum are so much thinner and smaller that it is difficult to suppose it to be the same with this. Beyond colour, however, and size, I find no satisfactory difference, and it is probably a mere local variety of E. oncidioides. Hostmann's 792, of wich I have seen only a single specimen, seems also to be referable here.

Huc: *Epidendrum* (Encyclium) *spectabile* Focke in v. Mohl et v. Schltdl. Bot. Z. 1853. 229.

Foliis linearibus acutis plicatis rigidis, pseudobulbis fusiformibus 2—3 phyllis, scapo paniculato terminali 2—3 pedali, sepalis oblongo obovatis, petalis paulo latioribus orbiculato-ovatis unguiculatis sepalisque patentissimis, labello libero trilobo, disco et basi loborum lateralium columnam amplectens, lobo medio suborbiculato apiculato margine crispo unguiculato, lobis lateralibus oblongis patentibus disco subcarnoso lineis 2 elevatis instructo, columna clavata bialata.

Radices crassiusculae, albidae. Rhizoma repens, annulatum, pseudobulbigerum. Pseudobulbi fusiformes, elongati; ad basin incrassati, 2—3 phylli. Folia ensiformia vel linearia, plicata, carinata, acutiuscula, rigida, erecta, coriacea, bipedalia. Scapus terminalis, paniculatus, multiflorus, erectus, 2—3 pedalis, purpureus, bracteatus. Bracteae minutae. Sepala oblongo-obovata seu late spatulata, apiculata, concava, supremum paulo angustius, resupinatum, 1—5 centim. longum. Petala paulo latiora, aequilonga, orbiculato, ovata, unguiculata, subincurva, apiculo recurvo. Sep. pet. et col. pallide viridia, extus (petala etiam intus) atropurpureo dense punctata. Lab. liberum, trilobum, sepalis petalisque aequilongum, disco et basi loborum lateralium columnam amplectens, album, lobo medio suborbiculato apiculato, incurvo conduplicato, margine crispo, brevi unguiculato violaceo-striato, lobis lat. oblongis obliquis patentibus apice rotundatis, disco subcarnoso, lineis 2 elevatis luteis incrassatis. Columna clavata, concava, labelli discum vix superans, apice dilatata et bialata, lobis rotundatis incurvis luteis, basi canaliculato, clinandrio bidentato, centimetro brevior. Anthera cordata, obliqua, 4 locularis, septorinis marginibus membranaceis, flavis. Poll. 4 coll., per paria caudiculis 2 linearibus replicatis (singulum processu filiformi) affixa, oblongo-falcata, compressa, flava. Capsula ovali oblonga, in pedunculum attenuata, brevi rostrata, trisulcata, inter sulcos tricostata, papillis minutis albidis muricata, atroviridis. — Distr. Para, ad pag. Jodensavane. Jul. Aug. Sept.

Huc: *Epidendrum affine* Focke in v. Mohl et v. Schlechtdl. Bot. Zeit. 1853. 341.

Foliis ensiformibus plicatis emarginatis striatis, pseudobulbis turbinatis 2-phyllis, scapo composito-racemoso terminali foliis triplo longiore erecto, sepalis late-lanceolatis apiculatis, petalis spathulatis acutis, labello trilobo, lobo medio sub-orbiculato apiculato revoluto crispo, lateralibus oblongis apice revolutis, disco et loborum lateralium basi columnam amplectens, columna clavata bialata.

Rhizoma repens. Pseudobulbi turbinati, rugosi, juniores vestiti, 2- (rarius 3-) phylli. Folia ensiformia v. linearia, plicata, carinata, obtusa, emarginata, stricta, vix pedalia. Scapus terminalis, paniculatus v. composito-racemosus, racemulis 3-floris,

erectus, 2-pedalis, viridis, bracteatus. Bracteae cordatae acutae, plicatae, patulae, fuscae. Perianthium patens. Sepala late-lanceolata, acuta, viridia; supremum convexum; lateralia concava, 12 mm. longa. Petala sepalis aequilonga, spathulata, acuta, parte dimidia inferiore sepalis multo angustiora, convexa, viridia. (Petala et sepala sub lente et tactu subvelutina). Labellum liberum, trilobum, paullo brevius, disco et loborum lateralium basi columnam amplectens, album; lobo medio suborbiculato, apiculato, revoluto, crispo; lateralibus oblongis, obliquis, obtusis, columnae adplicatis, apice oblique revolutis, viridibus; disco lineis duabus elevatis albis medio foveolam efformantibus instructo. Columna clavata, concava, labelli discum vix superans, viridis, apice dilatata et bialata, alis rotundatis incurvis albidis, basi canaliculata. Anthera cordata, obliqua, 4-locularis, septorum marginibus membranaceis, flava. — Habitat in distr. Para Surinamensi. — Florebat Novembri et Decembri. — Differt haec species ab E. spectabili nob. praesertim pseudobulbis turbinatis (nec fusiformibus), foliis brevioribus, inflorescentia minus divaricata magisve racemosa, floribus minoribus, petalis et sepalis non maculatis.

Huc: *Epidendrum* (Encyclium) *guatemalense* Klotzsch in Allg. Gartz. 1852. p. 250:

Caule ascendente subramoso radicante pseudobulboso, pseudobulbis ex ovato oblongis teretibus, apice attenuatis diphyllis; foliis lineari lanceolatis, longius attenuatis brevi acutis coriaceis subtortuosis subtus carinatis racemo subsimplice terminali subduplo brevioribus, perigonii foliolis patentibus viridibus, extus intusque striis punctiformibus minutissimis fusco violaceis ornatis, exterioribus oblongis spathulatis levissime acutis, labelli omnino liberi trilobi candidi: lobis lateralibus obovatis columnam amplectentibus, intermedio orbiculari deflexo brevissime acuto lineis violaceis angustis parallelis notato, basi anguste naviculari subcalloso; columna trigona auriculata, auriculis obtusis deflexis vitellinis; germinibus teretibus albido punctato tectis.

Pedunculus bipedalis 1½″.

32. EPIDENDRUM CERATISTES Lindl. in Bot. Reg. 1844. Misc. 92. Huc Lindl. l. c. 31.:

E. pseudobulbis conicis 2—3-phyllis, foliis ensiformibus strictis scapo duplo brevioribus, panicula longa cernua racemiformi ramulis laevibus divaricatis, sepalis petalisque obovatis acutissimis subconformibus (herbaceis), labelli trilobi lobis lateralibus erectis obtusis ovatis apice recurvis, intermedio subrotundo unguiculato acuminato crispo striato, ungue medio depresso versus basin 4-costato, columna apice acute auriculata, anthera tricostata.

Wild in New Grenada; in the province of Rio Hacha; Sierra of Sa. Martha, at the height of 5000 feet — Linden, 1658; Socorro and Ocanna — Schlim, 1007 (v. v. c. et s. sp. comm. cel. Linden). — Panicle about three feet long; the leaves resemble those of E. virgatum, but are not so glaucous; the flowers are extremely sweet, clear green (Mr. Linden says dull yellow) with a whitish lip, streaked with red, and the column has two horn-like ears. — Rchb. fil. in Bonpl. III. 67. Ocanna Wagener. — Rchb. fil. Bonpl. II. 19. Caracas. 4000′. Wagener.

33. EPIDENDRUM PLICATUM Lindl. in Bot. Reg. 1847. t. 35. Huc Lindl. l. c. 32.:

E pseudobulbis ovatis diphyllis, foliis ensiformibus acutis racemo brevioribus, sepalis petalisque lanceolatis cuspidato-acuminatis, labelli lobis lateralibus oblongo-lanceolatis undulatis basi elevatovenosis, intermedio cordato transverso plicato crenato cuspidato, callis 2 maximis carinatis acutis apice subliberis in unguem.

Wild in Cuba — Loddiges (v. v. c.) — The plaited crenelled lip, with a long cusp, is quite peculiar; it is of a rich crimson, as are the petals at the back; but the sepals and inside of the petals are green, the former just warmed and the latter richly spotted with crimson.

54. EPIDENDRUM ODORATISSIMUM Lindl. in Bot. Reg. t. 1415. LO., 10. Huc Lindl. l. c. 33.:

E. pseudobulbis ovalis corrugatis, foliis binis loratis, racemo subsimplici, bracteis membranaceis ochreatis, sepalis oblongis petalisque cuneatis patentibus, labelli trilobi lobis lateralibus linearibus obtusis, intermedio ovali rugoso multo latiore, disci callo elevato acuminato medio excavato lamina laterali s. plica utrinque adjecta prope basin, columna apice obtuse auriculata.

Epidendrum glutinosum Scheidw. in Allg. Gartenz. 1843. p. 110?
Macradenia lutescens Lodd. Bot. Cab. t. 1556. non R. Br.
Encyclia patens Hooker Bot. Mag. t. 3013.

Wild in Brazil — Capt. Sullivan, R. N.; in woods near Rio Janeiro — Harrison (v. v. c. et s. sp. in hb. Miers.) — Flowers olive-green with yellowish edges, or quite green, very sweetscented. None of the figures above quoted are good, all having been made from unhealthy garden specimens. The middle lobe of the lip is in reality wrinkled with elevated veins, and there is a distinct plait or fold on each side the main callus near the base.

55. EPIDENDRUM TAMPENSE Lindl. in Bot. Reg. 1847. sub t. 35. Huc l. c. 34.:

E. pseudobulbis monophyllis anguste ovatis acuminatis teretibus, foliis linearibus apiculatis, panicula rara racemosa duplo brevioribus, bracteis obsoletis, sepalis petalisque oblongo-linearibus acutis, labelli tripartiti laciniis lateralibus linearibus obtusis intermedia oblonga acuta paulo longiore, disco bilamellato linea intermedia antrorsum interjecto, columnae auriculis minutis acutis.

Wild in Florida; Tampa Bay Torrey (v. s. sp. comm. cel. Torrey.) — Pseudobulbs small and terete, with a narrow tapering neck. Leaf from seven to eight inches long, and not more than three lines wide. The species differs from the E. gracile of the Bahamas in its acute lip, narrow solitary leaves, and smaller flowers.

56. EPIDENDRUM OXYPETALUM Lindl. Orch. Linden. n. 46. Huc l. c. 35.

E. pseudobulbis monophyllis parvis ovatis acuminatis, foliis rigidis linearibus scapo paniculato flexuoso aequalibus, sepalis petalisque lineari-lanceolatis acutis, labelli tripartiti laciniis lateralibus elongatis obtusis pubescentibus, intermedia unguiculata ovata acuta venis scabriusculis, columna aptera.

Wild in Cuba; in the forests of Guantanamo — Linden. — Pseudobulbs oval, rounded, acute. Leaves linear-lanceolate, coriaceous. Scape a foot high. Flowers dull yellow.

57. EPIDENDRUM FUCATUM Lindl. in Bot. Reg. 1828. Misc. 17. Huc l. c. 36.:

E. pseudobulbis subrotundo-ovatis caespitosis monophyllis, foliis ligulatis coriaceis obtusis scapo brevioribus, panicula nutante multiflora, bracteis ovatis acutis squamiformibus, sepalis petalisque lineari-oblongis tessellatis aequalibus obtusis conniventibus, labelli liberi tripartiti lobis lateralibus erectis linearibus apice rotundatis, intermedio ovali multo brevioribus, disci lamellis 2 elevatis ad basin lobi intermedii.

Epidendrum polyanthum Hort. Gall.

Wild in Cuba — Captain Sutton, R. N., (v. v. c.) — Flowers small, dull yellow, tessellated, with a pink spot in the centre of a white lip.

Huc *Epidendrum Sagraeanum* A. Rich. in Ramon de Sagra etc. N. 235. tab. 75.

Pseudobulbis ovoideis oblongis, vaginis laxis vestitis, apice monophyllis; folio oblongo, angusto, 1—8 uncias longo, coriaceo, apice obtuso —, vix unam unciam lato, scapo terminali tereti bipedali; sepalis externis crassiusculis, subspathulato oblongis, vix acutiusculis; internis aequilongis, spathulatis, obtusis, luteolis, labello medietate inferiore

gynostemio parallelo, idque amplexanti, 3 lobo; lobis lateralibus oblongis angustis, obtusis, subfalcatis, intermedio obovali obtusissimo margine undulato crispo basi angustato et subunguiculato paulo brevioribus.

Crescit in insulae Cubae locis sylvaticis, parasiticum in arborum cortice (Ramon de la Sagra).

Huc: *Epidendrum affine* (Tab. 78.) A. Rich. in Ramon de Sagra n. 237.

Pseudobulbis subrotundo ovatis caespitosis, monophyllis; foliis lingulatis coriaceis obtusis, scapo brevioribus; panicula nutante multiflora, bracteis ovatis acutis squamiformibus, sepalis petalisque lineari-oblongis lobellatis aequalibus obtusis conniventibus, labelli liberi tripartiti lobis lateralibus erectis linearibus apice rotundatis, intermedio acuto ovali multo brevioribus, callo sulcato, plano, elevato basi lobi intermedii.

Crescit in insula Cuba.

Obs. Conocemos sola esta especie por el caracter que reproducimos del professor Lindley. Nos parece tener relaciones con las tres especies precedentes.

Huc: *Epidendrum hircinum* A. Rich. in Ramon de Sagra N. 236. Tab. 77.

Pseudobulbis ovoideis apice attenuatis, $2^1/_2$--3 pollices longis, 1 pollices latis, apice diphyllis; foliis coriaceis, oblongis, angustis, subacutis, dorso subcrenatis aveniis, 5—7 lineas latis, 6—8 pollices longis; scapo terminali, foliis duplo longiori, nudo, basi simplici, apice ramoso paniculato, floribus amplitudine mediis, pedicellatis, bractea minima suffultis; sepalis patentibus intensive luteis subcinnamomeis spathulato - oblongis acutis concoloribus; labello trilobo gynostemium obtegente libero; lobis lateralibus obliquis, oblongis obtusis, lineis purpureis subsimplicibus facie interna notatis; terminali elliptico, oblongo, plano, integro, sessili in disco venis violaceis approximatis notato, in ambitu albo; gynostemio brevi clavato purpurascente.

Crescit in sylvis insulae Cubae.

Obs. p. 237. He aqui tres especies, E. oxypetalum Lindl., E. affine Nobis, y E. Sagraeanum Nobis, que tienen entre si una notable analogia. Todas las tres tienen flores perquen as amarillas ó perduscas con un labelo blanco. El E. oxypetalum se distingue por sus sépalos mas estrechos y alargados, mas agudos, por el lobulo medio de su labelo oboval y agudo; por sus bulbos que llevan dor hojas estrechas coriaceas, casi de la longitud del hastil d'escapo.

2° El E. Sagraeanum Nobis, tiene los bulbos llevendo solamente una hoja mas ancha y mas corta, los sepalos espatulados avenos agudos en el vertice; su labelo blanco, recorrido por venas violetas; el lobulo medio oboval muy obtuso y ondulado en su contorno;

3° En cuanto el E. que llamamos affine sus seudobulbos con alargados, lisos, portadores de dos hojas estrechas y cas agudos, dos veces mas cortas que el escapo, sus petalos soc espatulados algo agudos; el lobulo medio de su labelo es oboval; agudo, plano y entero en su contorno. Difiere puer de las dos especies praecedentes por sus bulbos que llevan dos hojas del E. Sagraeanum por el lobulo medio de su labelo entero, plano y agudo, y del E. oxypetalum por sus sepalos espatulados y la forma del lobulo medio de su labelo.

38. EPIDENDRUM CHLOROLEUCUM Hooker in Bot. Mag. t. 3557. Lindl. l. c. 37.:

E. pseudobulbis oblongis ovatis diphyllis, foliis coriaceis ligulatis apice rotundatis obscure bilobis, racemo paniculato, sepalis petalisque subaequalibus lineari-lanceolatis obovatis, labelli trilobi liberi lobis lateralibus linearibus obtusis inflexis, intermedio ovato acuminato crispulo multo brevioribus, disci lamellis 3 obscuris, columnae auriculis minimis obtusis.

Epidendrum chloranthum Lindley Bot. Reg. 1838. Misc. 28.

Wild in Guayana — Schomburgk (v. v. c.). — Flowers scentless, pale green without spots, and a white lip.

b. lobo intermedio obtuso.

* Rhachi laevi.

59. EPIDENDRUM VIRGATUM Lindl. in Hooker's Journal III. 83. Lindl. l. c. 38.

E. pseudobulbis ovatis oblongisve sub-compressis rugosis, foliis binis ensiformibus ternisque convexis subundulatis acutis glaucis unciam latis, panicula virgata ramis longis gracilibus, sepalis lanceolatis petalisque duplo angustioribus patentibus discoloribus, labelli unguiculati lobis lateralibus acutis rectangulis intermedio subrotundo-obovato, callo maximo rotundato acuminato pone basin.

Wild in Mexico; on the ground among Pteris aquilina, on the mountains of Coban, and the Cumbre of Chencas — Hartweg (v. v. c. et s. sp.). — In general appearance much like E. vitellinum, but with more glaucous leaves. Flowers small, dirty green stained with brown, arranged in a long lax graceful panicle, the branches of which are simple, and sometimes as much as a foot long, with nearly twenty flowers on each. The lip is whitish yellow. Scape sometimes seven feet high.

60. EPIDENDRUM AMABILE Linden Rchb. fil. — Rchb. fil. in Bonpl. III. 219.

Aff. E. virgato labelli trilobi lobis lateralibus divaricatis ligulatis obtusatis, lobo medio obovato apice obtuse bilobulo callo depresso subobsoleto in lineolas tres excurrente ante basin lobi medii.

Panicula gracilis pruinata multiflora. Flores illos E. virgati aequantes. Sepala ac tepala (angustiora) lanceolata acuta brunnea pruinata. Labellum aureum purpureo punctatum. Gynostemium purpureum apterum apice obtusissime trilobum; subliberum. Mexico. Ghiesbreght 37. „Les bulbes sont petits et aplatis. Fleurit en Février. On le trouve seule sur des chênes rabougris en terre chaude. Elle n'est pas odoreuse."

61. EPIDENDRUM LINKIANUM Klotsch in Allg. Gartenz. Sept. 22. 1829. Lindl. l. c. 39.:

E. pseudobulbis fusiformibus 2—3-phyllis, foliis lineari-ensiformibus recurvis racemo paucifloro longioribus, sepalis patentissimis lineari-lanceolatis, petalis conformibus angustioribus, labelli lobis lateralibus minutis erectis acutis intermedio ovato-oblongo crispo venis elevatis sub columna pubescentibus.

Epidendrum Pastoris Link und Otto Abbild. t. 12.

Wild in Mexico — Deppe (v. v. c.). — Flowers small, dull yellow, streaked with purple. Lip nearly white.

Huc: *Epidendrum tripterum* Lindl. in Hook. Journ. III. 83. Lindl. l. c. 58.:

E. pseudobulbis ovalibus compressis diphyllis, foliis lineari-oblongis obtusis racemo paucifloro (4—6) subaequalibus, floribus erectis, sepalis petalisque lineari-lanceolatis patulis, labelli trilobi lobis lateralibus linearibus obtusis planis intermedio subrotundo basi angustato undulato venis rugosis elevatis, clinandrio obtuse 3-lobo, capsula anguste clavata triptera.

Wild in Mexico — Karwinski (v. s. sp. comm. b. Zuccarini). — The whole plant when in bloom little more than six inches high. Flowers apparently dull purple, with a pale lip, on long peduncles, and erect, not drooping. Forms a transition to the last section of Encycliums, being nearly allied to E. tessellatum.

62. EPIDENDRUM CONCOLOR La Llave. LO. 12. Lindl. l. c. 40.

E. foliis in pseudobulbos confertos lenticulares solitariis lato-lanceolatis acutis, scapo filiformi 5-floro, sepalis ligulatis, petalis linearibus,

labello tripartito laciniis integris intermedia majore, ungue columnae longitudine.

Wild in Mexico; on trees near Valladolid — La Llave. — Flowers pale yellow, whole-coloured, with a striated labellum.

63. EPIDENDRUM PASTORIS La Llave. LO. 7. Klotzsch in Allg. Gartenzeit. Sept. 22. 1838. Lindl. l. c. 41.

E. pseudobulbis oblongis 2—3-phyllis, foliis linearibus carinatis subtortuosis, floribus racemosis, sepalis lineari-subspathulatis acuminatis, petalis spathulatis acutis, labello trilobo lobis lateralibus majoribus basi semilunatis integerrimis basin columnae orbiculatim amplectentibus, medio cordato deflexo minore acuto margine basique recurvo, columna semitereti obtuse tridentata, pericarpiis elongatis acuto-triquetris.

Wild in Mexico — Klotzsch; on trees in the province of Mechoacan — La Llave. — Flowers fragrant, like Vanilla, dull yellow externally, striped with purplish brown inside. Lip whitish, becoming yellow, with purple cross-bars on the lateral lobes, and minute purple dots on the middle one. Column brown, with three yellow spots at the end.

Obs. Epidendrum pastoris Klotzsch! Herb. Berol.! nil est nisi Epidendrum pterocarpum.

64. EPIDENDRUM OVULUM Lindl. in Bot. Reg. 1843. Misc. 71. Lindl. l. c. 42..

E. pseudobulbis oviformibus diphyllis, foliis linearibus canaliculatis acutis, scapo filiformi foliis paulo longiore 3-floro, sepalis linearibus 3-veniis, petalis angustioribus spathulatis, labelli trilobi lobis lateralibus nanis acutis intermedio dilatato rotundato venis radiantibus glandulosis variegato, columnae tridentatae dentibus lateralibus rotundatis denticulatis.

Wild in Mexico; near Bolanos — Loddiges (v. v. c.). — In habit resembling E. bractescens, or aciculare. The sepals and petals are olive green; the lip white, with rose-coloured side-lobes and crimson glandular radiating veins.

65. EPIDENDRUM ACICULARE Bateman in Bot. Reg. 1841. Misc. 98. Lindl. l. c. 44.:

E. pseudobulbis oblongis diphyllis, foliis linearibus canaliculatis acutis racemo simplici aequalibus, sepalis petalisque lineari-lanceolatis aequalibus acutis, labelli laciniis lateralibus nanis ascendentibus linearibus obtusis apice recurvis, intermedia ovato-oblonga subundulata apiculata.

Epidendrum aculeatum Hort. Kew. in hb. Hooker.

Epidendrum linearifolium Hooker in Bot. Mag. t. 4572.

Wild in the Bahamas — Skinner; Mexico, near Oaxaca — Galeotti 39 (v. v. c. et s. sp. comm. cel. Galeotti). — A little species, with long narrow leaves, a slender erect raceme of six or seven flowers, whose sepals and petals are dull purple, and lip white, enlivened with rosy veins. — Lemaire l. c. 145.

Huc: *Epidendrum bractescens* Lindl. in Bot. Reg. 1840. Misk. 122. Lindl. l. c. 43.:

E. pseudobulbis ovatis caespitosis 3—4-phyllis, foliis linearibus, scapo debili 3—4-floro, bracteis infimis foliaceis floribus longioribus, supremis obsoletis, floribus nutantibus longe pedunculatis, sepalis petalisque lineari-lanceolatis acuminatis discoloribus labello longioribus, labelli liberi lobis lateralibus apice recurvis obtusis subdentatis, intermedio unguiculato subrotundo-ovato multo longiore secus unguem elevato sulcato pubescente.

Wild in Mexico; near Oaxaca — Hartweg (v. v. c.). — One of the prettiest of the small species. Pseudobulbs exactly ovate, closely clustered, and about as large as a pigeon's egg. Flowers scentless, with a beautifully but delicately painted white

lip, the gay effect of which is heightened by the contrast with the dingy purple of the long narrow sepals and petals.

66. EPIDENDRUM XIPHERES Rchb. fil. in V. Houtte Flore des Serres IX. 98. Bonpl. II. 89.

Pseudobulbis pyriformibus monophyllis, folio crassissimo lineari canaliculato acuto curvato, pedunculo capillari 3—4 floro, bracteis brevissimis, ovariis cum pedicellis hyalino papillosis, sepalis oblongo-linearibus acutis, tepalis angustioribus basin versus valde attenuatis, labello libero unguiculato, medio trilobo, lobis lateralibus linearibus, lobo medio unguiculato dein cordato acuto, margine crispulo, callo in ungue lobi medii excavato tomentoso, antice in basi laminae labelli in tres venas elevatas puberulas excurrente, venulis lateralibus carinato elevatulis, gynostemio gracili, androclinio tridentato, lobis lateralibus minutis acutis, lobo postico medio subobliterato bidentatulo.

Importée du Pérou par MM. Booth et fils de Hambourg, qui nous en ont communiqué des exemplaires.

Obs. Ovaria aspera, hinc cf. etiam sectionem rhachi aut ovariis asperis.

67. EPIDENDRUM NEMATICAULON A. Rich. in Ramon de Sagra Tab. 79. n. 238.

Pseudobulbis ovoideo-oblongis, laevibus, crassitie passularum, aggregatis, apice monophyllis, vagina striata applicata erosa vestitis, folio lineari angusto crasso, coriaceo, apice acuto, superne subcanaliculato, 7 uncias longo, sesquilineam ad 2 lineas lato; scapo terminali foliis paulo longiori, simplici tenuissimo valde gracili, 4—5 floro; floribus secundis bractea lineari brevi applicata stipatis; sepalis patulis subspatulato-linearibus acutis internis angustioribus, luteo bruneis, concoloribus, labello pallide luteo, unguiculato, fere usque ad basin libero, trilobo; lobis lateralibus gynostemio applicatis linearibus acutis, apice recurvis, gynostemium superantibus, intermedio cordiformi, sinuoso, in disco nervis 3 longitudinalibus cristaeformibus et nervis lateralibus apice ramosis notato; gynostemio recto, antice plano; anthera depressa, in medio biloba.

Cuba. V. V. c. in cald. hort. bot. soc. med. Paris.

68. EPIDENDRUM PICTUM Lindl. in Bot. Reg. 1848. Misc. 43. Lindl. l. c. sub 46.

E. pseudobulbosum, foliis ligulatis coriaceis obtusis dorso rotundatis, racemo erecto paniculato, sepalis petalisque obovato-linearibus subaequalibus, labelli trilobi liberi lobis lateralibus linearibus acutiusculis subfalcatis columnam amplexantibus sinubus plicatis, intermedio ovali acuto crispo multo brevioribus, disci venis elevatis.

Wild in Demerara — Loddiges (v. v. c.). — Resembles E. odoratissimum; with dull yellow flowers, neatly striped with crimson. Also related to E. chloroleucum, from which its leaves distinguish it.

69. EPIDENDRUM MICROBULBON Hooker ic. t. 347. Lindl. l. c. sub 46.:

E. pseudobulbis ovatis diphyllis, foliis lato-linearibus scapo brevioribus, racemo laxo paucifloro, bracteis membranaceis acutis, sepalis linearibus petalisque angustioribus patentissimis, labelli angusti lobis lateralibus nanis rectis obtusis sinubus clausis, intermedio oblongo crispulo venis sabris.

Wild in Mexico: Oaxaca, on trees at the height of 7000 feet — Galeotti 5188 (v. v. c. et s. sp. in hb. Hooker). — Flowers the size of E. bractescens, rose-coloured; lip yellow with red dots.

70. EPIDENDRUM OBTUSUM Alph. De Candolle Plant. rar. Genev. 8 not. p. 17. Lindl. l. c. sub 46.

E. pseudobulbis ovatis acutis diphyllis coriaceis linearibus acuminatis scapo subpaniculato brevioribus, bracteis membranaceis caducis, labelli lobis crispis obtusis striatis aequilongis intermedio latiore, callo disci acuminato.

Wild in Mexico — Alph. De Candolle. — Leaves four inches long. Scape a foot long, drooping; flower-stalks two to three lines long. Sepals half an inch long, two lines broad, greenish brown. Lip whitish, streaked with dirty purple. Possibly this species belongs to the Sphaerochiles.

Huc: *Epidendrum obtusum* Alph. DC. Hist. not. p. 17.

E. pseudobulbis ovoideo acutis laevibus, scapo elongato declinato multifloro sepalis petalisque oblongo-lanceolatis obtusis patentibus, labelli liberi trilobi cucullati lobis crispis obtusis striatis, medio latiore disco calloso glabro oblongo acuto.

Mexico. — Fausses bulbes ovoides pointues lisses, terminées par 2 feuilles opposées linéaires acuminées, planes, coriaces, longues de 4 pouces. Pédoncule d'un pied de longueur, grêle, cylindrique, lisse, déclinè, multiflore. Bractées caduques, distantes, serrées en forme de gaine, ovales, obtuses, longues de deux à trois lignes seulement. Huit à dix fleurs pédicellées, et les inférieurs sur des ramifications du pédoncule. Pédicelle de deux à trois lignes.

Sepales oblongs-lancéolés, obtus, d'un brun verdâtre, étalés, longs de 4—6 lignes, larges de deux lignes, les supérieurs un peu plus grands, que les autres. Pétales semblables aux sépals, mais un peu plus rétrècis à la base. Labelle d'une ligne ou deux plus court que les pétales; dans sa portée inférieure à bord roulés en dedans, de manière à former un cylindre blanchatre, rayé de pourpre sale, entourant la colonne staminale, mais libre d'avec elle: dans sa partie supérieure, divisé en trois lobes obtus, légerement crispes et rayés de rouge. Le lobe inférieure à peine plus long que les lobes latéraux, mais de moitié plus large et tout à fait arrondi. Une languette en tache calleuse, glabre, blanche, oblongue, pointue, sur le tube du labelle du côté inférieur, s'étendant jusque vers le milieu de sa longueur. Colonne trois fois plus courte que le labellum, glabre, convexe et rangé en dehors, planeconvexe et plus pâle en dedans. — Mexico. Paccard. — Diff. de l'E. asperum Lindl. par un labelle plus long, dont le lobe central qui dépasse à peine les latéraux est arrondi, obtus, en lieu d'être ovale, pointu. La couleur de la fleur est d'ailleurs la même.

71. EPIDENDRUM GRACILE Lindl. in Bot Reg. t. 1765. Lindl. l. c. 48.

E. foliis in pseudobulbos ovatos corrugatos pluribus lorato-ensiformibus, racemo simplici longissimo, sepalis oblongis petalisque cuneatis patentibus, labelli fere liberi lobis lateralibus semiovatis intermedio oblongo crispo obtusissimo duplo minoribus disco bicostato venis elevatis.

Wild in the Bahamas — J. C. Lees (v. v. c.). — Flowers green, lip yellow, lined with purple.

72. EPIDENDRUM VIRIDIFLORUM Lindl. in Bot. Reg. 1842. Misc. p. 30. — Huc Lindl. l. c. 49.:

E. pseudobulbis ovatis diphyllis, foliis lineari-lanceolatis carinatis recurvis acutis panicula brevioribus, sepalis petalisque linearibus acutis falcatis erectis, labello postico apice 3-dentato lobis lateralibus planis, intermedio ovato crispo aequalibus, disci callo duplici angusto carnoso, columna aptera.

Encyclia multiflora Hooker in Bot. Mag. t. 2831. I.O. 111.

Wild in Brazil; near Rio Janeiro — Harrison (v. s. sp. in hb. Hooker.). — Leaves shorter, than the panicle, which is about a foot high, slender, and rather flexuose. Flowers membraneous, green, with a purple stain at the base. The figure in the Botanical Magazine is faithful in all particulars.

73 EPIDENDRUM RUFUM Lindl. in Bot. Reg. 1845. Mis. 42. Huc Lindl. l. c. 50.:

E. pseudobulbis pyriformibus 2—3-phyllis, foliis brevibus lanceolato-ligulatis patentibus scapo paniculato brevioribus, sepalis petalisque ovalibus acutis subcarnosis, labelli laciniis lateralibus brevibus semiovatis erectis intermedia obovata convexa margine revoluta apice rotundata secus axin elevata carnosa basi in laminam duplicem (disci costam) divisa, columna membranaceo-marginata.

Epidendrum primulinum Bateman in Paxton's Flower Garden I. sub t. 30. 1850.

Wild in the Bahamas — Skinner; Brazil (?); near Rio — Lieutenant Turner R. N. (v. v. c.). — Leaves six to eight inches long. Scape a foot and more high. Flowers in a narrow slightly branched panicle, very sweet, like primroses, brownish-yellow. Mr. Bateman informs me, that Mr. Skinner certainly collected this in the Bahamas, along with E. altissimum and aciculare. In Sir C. Lemon's garden, it is said to have been sent from Rio, by Lieutenant Turner. I have seen no wild specimens.

74. EPIDENDRUM GALLOPAVINUM Rchb. fil. Bonpl. III. 219.

Affine E. rufo Lindl., tepalis unguiculatis ovatis, labelli lobis lateralibus trapezoideis, lobo medio unguiculato obtuse triangulo, callo depresso inter lobos basilares antice in venas varicosas 4 exeunte, papulis pluribus circumjectis in disco lobi medii, gynostemii alis cartilagineis antrorsis apice acutis, tri — quadridentatis.

Sepala oblonga cuneata. Tepala cuneato unguiculata ovata. Labellum ima basi adnatum trilobum; lobi laterales obtusanguli, trapezoidei seu quadrati, margine antice trianguli obtusi, sinubus angustis interjectis inter lobum medium; gynostemium accedens. Anthera apice retuso biloba. — Blüthen braun. Lippe gelbweiss. Adern der Seitenlappen und Schwiele purpurn. Lippenscheibe amethystfarbig gebuckelt. Eine prachtvolle Pflanze mit grosser Rispe. Bulbe und Blätter wie bei odoratissimum. Von Rio Janeiro durch Herrn Consul Schiller eingeführt.

75. EPIDENDRUM FLAVUM Lindl. in Hook. Journ. III. 83. Huc Lindl. l. c. 51.:

E. pseudobulbis ovatis attenuatis 3-phyllis, foliis ensiformibus paniculae pauciflorae subaequalibus, sepalis petalisque patentibus subaequalibus, lineari-oblongis obtusis, labelli laciniis lateralibus linearibus truncatis, intermedia unguiculata obovata nuda, columna sub apice obtuse auriculata.

Wild in Brazil; in the province of St. Paul's — Martius; trees, Mission of Douro — Gardner 3456 (v. s. sp.). — Leaves rather more than a foot long. Flowers pale yellow, about an inch and a half in diameter. The inflorescence is only panicled at the base, and is probably very often simple.

76. EPIDENDRUM ALTISSIMUM Bateman in Bot. Reg. 1838. Misc. 61. Huc Lindl. l. c. 52.:

E pseudobulbis elongatis teretibus 2—3-phyllis, scapo paniculato longissimo, sepalis oblongis acutis, petalis conformibus basi angustatis, labelli lobis lateralibus dimidiatis erectis tortis obtusis, intermedio dilatato undulato laevi recurvo apiculato basi bicostato.

Wild in the Bahamas; in rocky districts — Skinner (v. v. c.). — Flowers as large as in E. oncidioides; smelling strongly of beeswax. — Gard. Chronicle 1852. 804.

77. EPIDENDRUM ALATUM Bateman Orch. Mex. t. 18. Huc Lindl. l. c. 53.:

E. pseudobulbis ovatis, foliis binis rectis ensatis obtusis, panicula laxa multo longiore, sepalis petalisque conformibus linearibus spathulatis unguiculatis obtusis, labelli trilobi laevis lobis rotundatis lateralibus erectis, intermedio convexo multo majore emarginato undulato intra marginem scabro venis pluribus elevatis coloratis, callo disci medio excavato, columna auriculata.

Epidendrum longipetalum Lindl. in Paxt. Flower Garden I. t. 30.

Epidendrum calocheilum Hooker in Bot. Mag. t. 3898.

Wild in Guatemala — Hartweg; Honduras, near Isabal — Skinner (v. v. c.). — Very sweet-scented. Panicle long, straggling. Sepals and petals greenish at the base, purple upwards, almost an inch and a half long. Lip straw-coloured, bordered with yellow, and streaked with rose.

Until this critical revision was undertaken, I was always under the impression that the plant figured in the Bot. Reg. in Oct. 1847, was Mr. Bateman's E. alatum, of which E. calocheilum is an undoubted synonyme; and therefore, I regarded E. longipetalum as a new species. A very careful re-examination of evidence shows, however, that this was an error, and it is now corrected.

Huc: *Epidendrum* (Encycl.) *formosum* Kl. in Allg. Gartenz. 1854. 201.

Pseudobulbis erectis, apice attenuatis glabris laevibus, deinde longitudinaliter corrugatis, foliis oblongis acutis coriaceis rigidis erectis subtus costa acuta prominula carinatis, racemo longe pedunculato purpurascente laete viridipunctato simplici 5 floro, floribus magnis flavido purpureis; perigonii foliolis spathulatis longi unguiculatis patenti reflexis stramineis, basi viridi; foliis interioribus basin versus angustioribus; labelli trilobi subliberi straminei rotundati lobis lateralibus apice magis dilatatis patentibus, intermedio orbiculato lanceo undulatoque marginato plano semideflexo, lineis elevatis crispatulis margine purpureis radiatim dispositis, callo disci elevato oblongo excavato, ac columna brevi albida trigona, apice utrinque auriculata.

Diff. ab E. alato: racemo simplici, foliis angustis longioribus, labelli lobis lateralibus marginis patentibus. — Guatemala Warscewicz. — Lemaire Jard. fl. I. tab. 81. — Gard. Chronicle 1852. 390.

78. EPIDENDRUM VIRENS Lindl. in Paxt. Flower Garden I. sub t. 30. Huc Lindl. l. c. sub. 54.:

E. panicula laxa erecta angusta, sepalis lineari-ovalibus, petalis aequilongis spathulatis acutis, labelli laciniis lateralibus erectis oblongis emarginatis, intermedia convexa plicata venosa apiculata retusa, callo disci excavato utrinque juxta sinum denticulo aucto, columna auriculata.

Wild in Guatemala — Skinner (v. v. c.). — Flowers green, whole coloured, except the lip, which is white, with crimson veins in the middle lobe; the lateral lobes green, with crimson veins, but white at the point. Certainly distinct from E. longipetalum, which it most resembles, in the form and proportion of its sepals, lip, and callus.

Huc *Epidendrum* (Encylium) *Wageneri* Klotzsch in Allg. Gtz. 1851. 250.

Pseudobulbis caespitosis, breviter ovatis, glabris, laevibus 2—3 foliatis, foliis linearibus, coriaceis, tortuosis, apice obtusis, subemarginatis, basi conduplicatis; racemo paniculato terminali olivaceo, laete viridi punctulato, pedicellis brevissime bracteatis, basi articulatis; germinibus teretibus, deorsum attenuatis punctato-scabris, perigonii foliolis aequalibus, spathulato erectis, patentibus, flavo viridibus, labello trilobo candido, lineis purpureis elevatis striato, basi bicalloso, lobis lateralibus brevibus, conniventibus, falcato oblongis, obtusis, lobo intermedio cordato, orbiculato-ovato, brevi, acuto; columna libera apice utrinque carinato-auriculata.

Pseudobulbi 2 pollices longi, supra basin $1\frac{1}{2}$ poll in diametro. Folia 15 poll. longa 8 lin. lata. Racemi bipedales. Flores odoriferi. Perigonii foliola 9 lin. longa, 3 lin. lata. Labellum album deinde alutaceum. In hort. reg. Berol. excultum Julio. Venezuela. Wagener. — Rchb. fil. in Bonpl. II. 19. Caracas. 3500'. Mai. Wagener.

Huc: *Epidendrum* (Encyclium) *ochranthum* A. Rich. in Ramon de Sagra. Tab. 78. n. 237.

Pseudobulbis caespitosis ovoideo-oblongis basi in rhizomate abeun-

tibus, apice 1—3-phyllis, 3 uncias longis, sesqui unciam latis, basi lineis circularibus ad insertionem bractearum annulatis; foliis erectis coriaceis angustis, apice obtusis, dorso subcarinatis, sesquipedalibus vix unam unciam latis; scapo terminali 2—3 pedes longo ramoso; floribus paniculatis pedunculatis magnis colore luteo sulphureis; sepalis patulis oblongo-spathulatis acutiusculis in utraque facie luteis; internis (petalis) conformibus vix paulo latioribus obtusioribusque concoloribus; labello libero trilobo erecto gynostemio applicato, idque amplexanti; lobis lateralibus erectis ovali oblongis obtusis, externe macula diffusa subpurpureo notatis; intermedio ovali obtuso margine obsolete undulato, in disco incrassato subtrilineato; gynostemio clavato dorso carinato antice ad apicem ala brevi angusta obtusa notato.

Crescit in insula Cuba. — Hemos descrito esta especie con vista de muestras vivas que flore cieron en el jardin botanico de la facultad de Medicine de Paris.

79. EPIDENDRUM AROMATICUM Bateman Orch. Mex. t. 10. Lindl. l. c. sub. 55.:

E. pseudobulbis sphaeroideis diphyllis, foliis late loratis recurvis, floribus membranaceis paniculatis, sepalis linearibus patentissimis basi angustatis, petalis conformibus sed paulo latioribus, labelli lobis lateralibus triangulari-falcatis rectis inflexis acuminatis, intermedio multo majore oblongo venis scabris cristato, callo disci oblongo brevi convexo in acumen producto, columnâ aptera.

Epidendrum incumbens Lindl. in Bot. Reg. 1840. Misc. 84.

Wild in Guatemala — Skinner in a temperature of 60° to 75° (v. v. c. et s. sp. comm. cel. Skinner.). — Flowers very sweet; in large pale dull yellow panicles, the lower branches of which curve gracefully downwards. The texture of the flowers is much thinner than that of allied species. The plant which I formerly called E. incumbens with a shorter lip and a narrow panicle, is apparently an accidental form, and not even a variety.

80. EPIDENDRUM AMBIGUUM. Huc Lindl. l. c. 56.:

E. panicula laxa, flexuosa, bracteis brevibus duris acutis, sepalis membranaceis lineari-lanceolatis incurvis, petalis angustioribus longe unguiculatis, labelli lobis omnibus crispato-laceris, lateralibus rotundatis, intermedio oblongo venis scabris, callo disci duplici antice in lineas 3 elevatas procurrente lamella brevi ad sinum attingente utrinque aucto, columnae auriculis acutiusculis.

Epidendrum alatum Lindl. in Bot. Reg. 1847. t. 53. nec Bateman.

Wild in Guatemala — Rucker (v. v. c.) – Flowers pale yellowish green, very sweet-scented. Lip straw-colour, spotted and streaked with rose.

This is the plant alluded to under E. alatum, n. 53, as having been confounded with species. It is in reality much nearer E. aromaticum, from which its very narrow unguiculate petals (ill represented in the Bot. Reg.), auriculate column, and totally different callus separate it. Both sepals and petals curve inwards exactly as is shewn in the figure just referred to. This and the next require to be carefully distinguished by the characters now assigned to them.

81. EPIDENDRUM TRACHYCHILUM. Huc Lindl. l. c. 57.

E. pseudobulbis elongatis diphyllis, foliis rectis coriaceis ensiformibus scapo pluries brevioribus, panicula densa ramosissima, bracteis brevibus membranaceis acutis, sepalis coriaceis oblongis patentissimis, petalis subconformibus, labelli lobis lateralibus oblique ovatis obtusis integris scabro-venosis, intermedio subrotundo crispo venis ramentaceis varicosis scaberrimis, callo disci quadruplici antice in lineas 3 elevatas laceras procurrente, lamella minuta juxta basin utrinque aucto, columnae auriculis truncatis.

Epidendrum alatum Lindl. in Plant. Hartweg. p. 92.

Wild in Mexico; on the Cumbre of Choacas — Hartweg (v. v. c. et s. sp.). — Flowers olive-brown, very leathery; sepals about eight lines long, but in E. ambiguum quite an inch. Lip deep yellow, studded with red warts, white and spotted with pink on the callus, brilliant green with red warts on the lower lobes.

82. EPIDENDRUM GUTTATUM Richard and Galeotti Orch. Mex. n. 39. Huc Lindl. l. c. 59.:

E. „pseudobulbis ovoideis 2-phyllis, fol. elliptico-oblongis acutis, scapo brevi compresso 3—4-floro, floribus aurantiacis punctatis, labelli trilobi lobis lateralibus subfalcatis, intermedio orbiculari apiculato."

Wild in Mexico, Galeotti.

* Rhachi, aut ovariis asperis.

83. EPIDENDRUM NEMORALE Lindl in Hook. Journ. III. 82. Huc Lindl. l. c. 60.:

E. pseudobulbis ovatis, foliis ensiformibus obtusis flaccidis, scapo pedicellis ovariisque verrucosis, racemo nutante, sepalis petalisque lineari-lanceolatis acuminatis, labelli trilobi lobis lateralibus subfalcatis acutis nanis intermedio ovali crenulato basi serrato bilamellato, columnae auriculis truncatis.

Epidendrum verucosum Lindley in Bot. Reg. 1844. t. 51.; Hooker Bot. Mag. t. 4606.

Wild in Mexico — Loddiges; on trees in groves near Sultepec — Martius (v. v. c. et s. sp. in hb. Martius.). — Flowers large, rich rose-colour, in a drooping raceme. Sepals full two inches long. The name E. verrucosum was applied by Swartz to another species. — Lemaire Jard. Fl. III. tab. 253.

84. EPIDENDRUM ASPERUM Lindl. in Hook. Journ. I. 6. Huc Lindl. l. c. 61.:

E. panicula stricta racemosa scabra, sepalis coriaceis spathulatis obtusis, petalis linearibus apice dilatatis, labelli lobis lateralibus semiovalis obtusis intermedio subrotundo cuneato venis tumidis striato, disci callo medio excavato apice in tres lineas elevatas flexuosas procurrente, columnae auriculis minutis obtusis.

Wild in Panama and W. Colombia — Cuming 1250; Guayaquil — Jamieson (v. v. sp.) — Much confusion has been introduced into the character of this plant in consequence of its having been accidentally mixed with E. flabellatum, n. 15, in my herbarium. The sepals and petals seem to have been dark-coloured, and the lip pale.

85. EPIDENDRUM ADENOCARPUM. La Llave. LO. 16. Huc Lindl. l. c. 62.

E. foliis strictis linearibus carinatis acutis in pseudobulbos pyriformes glaucescentes ternatim insidentibus, scapo erecto simplici v. paniculato multifloro, floribus distantibus, sepalis lineari-oblongis acutis, petalis paulo angustioribus unguiculatis, labelli semiliberi laciniis lateralibus obovatis intermedia 3-plo majore obscure quadriloba versus basin callosa venis 3 tenuibus elevatis radiantibus, columna bidentata, pedunculis papillosis.

? *Epidendrum crispatum* Knowles Flor. Cab. II. p. 79.

Epidendrum papillosum Bateman in Bot. Reg. 1838 misc. 8. Hooker in Bot. Mag. t. 3631.

Wild in Guatemala — Skinner; Mexico on the Irapaean Mountains — La Llave: Agua caliente, on the road to Salama — Hartweg (v. v. c. et s. sp.) — Flowers greenish yellow. Lip white, with three short purple streaks.

86. EPIDENDRUM STELLATUM. Huc Lindl. l. c. 63.

E. pseudobulbis cepaeformibus diphyllis, foliis ensiformibus acutis panicula scabra longioribus, sepalis petalisque angustioribus lineari-lanceolatis stellatis, labelli lobis lateralibus angustis falcatis intermedio sub-

rotundo plano venis rugulosis, disci callo medio excavato in lineas tres rugulosas procurrente, columnae auriculis minutis acutis, clinandrio denticulato.

Wild in the Caraccas — Purdie (v. s. sp. comm. cel. Hooker). — A slender grassy plant, with leaves fifteen inches long by half an inch broad. The sessile flowers and flat round lip are striking peculiarities in the dried state.

87. EPIDENDRUM ADENOCAULON La Llave. LD. 15. Huc Lindl. l. c. 64.

E. foliis in pseudobulbis binis v. ternis ensiformibus coriaceis, scapo simplici glanduloso, sepalis carinatis petalisque lineari-lanceolatis subaequalibus patentissimis, labello tripartito laciniis lateralibus acutis involutis intermedia cordata emarginata obtusa, columnae auriculis petaloideis.

Wild in Mexico; on trees near Valladolid — La Llave. — Scape two to three feet high. Flowers pale violet, with a veiny lip of the same colour. Bracts membranous. According to La Llave the lip is united to the column.

88. EPIDENDRUM GRAVIDUM Lindl. in Journ. Hort. Soc. IV. 114 (1849). Huc Lindl. l. c. 65.

E. scapo paucifloro apice flexuoso laeviusculo, floribus pendulis longipedunculatis clausis, pedicellis laevibus, ovariis fusiformibus maximis verrucosis; labelli trilobi lobis lateralibus linearibus, intermedio ovato acuto venis elevatis, columnae angulis superioribus inflexis.

Wild in Mexico; near Xapatam — Hartweg (v. v. c.). — Scape six inches high, four-flowered. Flowers green, never expanding; seated on a large fusiform deep olive-green ovary, studded with pale green warts. The ovary is one inch and a half long, the flower scarcely half an inch.

Obs. Potius monstrum, quam species mihi visum! Rchb. fil.

89. EPIDENDRUM TRACHYCARPUM Lindl. Bot. of Sulphur p. 172. Huc Lindl. l. c. 66.

E. pseudobulbis elongato-conicis 2—3-phyllis, foliis rigidis ensiformibus canaliculatis acutis, scapo subpaniculato ramulis pedunculisque scaberrimis, floribus carnosis, sepalis petalisque oblongis obtusis, labelli laciniis lateralibus nanis semiovatis acutis, intermedia rotundata emarginata laevi, capsula ovali scaberrima.

Wild in W. Mexico; Manzanilla Bay — Hinds (v. s. sp.) — Dried flowers nearly black; natural colour unknown.

c. Lobo intermedio manifeste bilobo.

90. EPIDENDRUM TESSELLATUM Bateman in Bot. Reg. 1838, misc. 9. Hooker, Bot. Mag. t. 3638. Huc Lindl. l. c. 69.

E. pseudobulbis ovalibus compressis 2-raro 3-phyllis, foliis lineari-lanceolatis scapo simplici flexuoso paucifloro longioribus, sepalis lineari-lanceolatis acutis mucronatis petalisque minoribus subspathulatis, labelli laciniis lateralibus brevibus rotundatis, intermedia majore oblonga undulata biloba v. retusa, disci callo lineari tomentoso seriebus tribus verrucarum nunc connatarum a fronte.

Epidendrum lividum Lindl. in Bot. Reg. 1838 misc. 91.

Wild in Guatemala — Skinner; Mexico near Oaxaca at the height of 3—5000 feet — Galeotti, 50 and 5320; Caraccas Sa. Martha — Purdie (v. v. c. et s. sp.) — Flowers dingy olive-brown: with a pale lip tessellated with crimson. The specimens vary in the warts of the lip; in one case now before me they form three complete lines with rugosities between; in Galeotti's n. 50, the lines are broken and incomplete; in another garden specimen seen by me in 1845, the warts were confluent into a single line lying between the downy callus and the point of the lip.

Huc: *Epidendrum lividum* Lindl. in Bot. Reg. July 1838. misc. 91. Lindl. l. c. sub. 11.

E. pseudobulbis anguste ovalibus compressis diphyllis, foliis lineari-lanceolatis subundulatis obtusiusculis, scapo paucifloro foliis breviore, ovario triquetro, sepalis erectis herbaceis linearibus mucronatis, petalis spathulatis obtusis aequilongis, labello libero lineari-oblongo obtuso crispo medio tomentoso serie triplici dentium elevatorum, intermedia majore, columna triquetra apice tricallosa.

Epidendrum articulatum Klotzsch in Allg. Gartenz. Sept. 22. 1838.

Wild in Colombia — Loddiges; La Guayra — Klotzsch (v. v. c.) — Flowers small, dull dingy purple, a little tessellated; their lip pale dirty yellow, with a few dull purple veins. — Rchb. fil. in Bonpl. II. 20. Caracas. 4000'. Aug. Wagener.

91. EPIDENDRUM SISYRINCHIIFOLIUM Richard and Galeotti, Orch. Mex. n. 35. Huc Lindl. l. c. 70.

E. „pseudobulbis ovoideis 2-phyllis, foliis lanceolatis acutis, floribus aurantiaco-viridibus subpaniculatis, labello oblongo lobis lateralibus acutis intermedio obcordato."

Wild in Mexico — Galeotti.

92. EPIDENDRUM VARICOSUM Bateman Bot. Reg. 1838. misc. 37. Huc Lindl. l. c. 71.

E. pseudobulbis lagenaeformibus 2—3-phyllis, foliis lanceolatis utrinque acuminatis scapo gracili brevioribus, internodiis elongatis, sepalis petalisque subaequalibus cuneato-lanceolatis carnosis vernicosis planis, labello unguiculato: laciniis lateralibus nanis triangularibus aut rotundatis, intermedia reniformi emarginata venis tuberculatis et varicosis picta, disci callo pulvinato ovato pubescente, columnae lobo dorsali crasso cylindraceo obtuso.

Epidendrum leiobulbon Hooker Journ. III. 308. t. 10.
Epidendrum phymatoglossum H. G. Reichenb. Bot. Zeit. 1852. p. 731.
Epidendrum chiriquense Id. p. 730.
Epidendrum Lunàeanum A. Richard in Hort. Par.
Epidendrum quadratum Klotzsch in Allg. Gartenz. 1850. 402.

Wild in Guatemala — Skinner; Costa Rica and Veragua — Warczewitz; Mexico on porphyry rocks near Oaxaca, at the elevation of 7—8000 feet — Galeotti 5080; Hacienda del Carmen — Hartweg (v. v. c. et s. sp.) — A small dull-brown-flowered species. The form of the lip, the flask or bottle-shaped pseudobulbs, and the acuminate leaves with wide internodes, especially distinguish it. It seems to be common from Mexico to Panama, and to present many varieties in the form and callosities of its lip. In the original Guatemala plant the lateral lobes of the lip are triangular, and the tubercles arranged in three rows in front of downy callus; in Galeotti's Mexican specimens the side-lobes are round, and the tubercles scattered without order over the lip. Other differences seem to occur among plants examined by M. Reichenbach, but I cannot think them of specific value. I learn from M. Pescatore that this is the E. Lunaeanum of A. Richard.

Huc: *Epidendrum* (Encyclium) *quadratum* Klotzsch Allg. Gartenz. 1850. 402.

Pseudobulbis caespitosis, ovatis, teretibus, laevibus, glabris in caulem articulatum attenuatis, foliis basi vaginatis subcoriaceis lanceolatis linearibus acuminatis, sublus leviter carinatis, ad articulationem insertis; racemo simplici caule continuo, pedem longo, 10—12 floro, glabro, floribus erectis, bracteis ovato lanceolatis acutis striatis suffultis; perigonii foliolis viridi fuscis, maculatis, externis obovato oblongis brevi acutis, internis spathulatis, subacutis, labello unguiculato, libero, quadrilobo, sordide albido, lobis lateralibus anguste oblongis, obtusis, patentibus, minutissime rubropunctatis, lobo medio bifido deflexo, radia-

tim plicato-tuberculoso, disco pulvinato, flavido; gynostemio striato, obtuse triangulato.

93. EPIDENDRUM CHIRIQUENSE Rchb. fil. in v. Mohl et v. Schlechtendl. Bot. Zeit. 1852. 730.

Foliis geminis lato-oblongis acutis cuneatis pergameneis (nec coriaceis!!), internodio inter utrumque conspicuo, pedunculo folia aequante seu superante, paucifloro, bracteis cuspidatis pedicellis multo brevioribus, perigonii phyllis externis oblongis acutis, lateralibus externis oblongis acutis, lateralibus internis spathulatis acutis, labello trilobo, basi cuneato, supra gynostemii basin adnato, lobis lateralibus linearibus, lobo medio producto, lato brevissimeque unguiculato obreniformi, bene bilobo, callo in ungue elongato crasso antice trilobo puberulo, seriebus 5 rectis callulosis ab illo ad medium lobum medium, venis radiantibus elevatulis, androclinii lobo postico bilobo.

Blüthenfarbe die des E. varicosum Bat. Ich habe diese, oder die folgende Art auf einer norddeutschen Blumenausstellung als E. varicosum ausgestellt gesehen. Allerdings sind diese drei Arten kritisch, aber einmal verstanden leicht zu unterscheiden. Man muss eben alle drei gleichzeitig vor sich haben. Zunächst hat varicosum zungenförmige, lederartige Blätter. Im Blüthenbau steht es nahe, doch ist der Buckel vorn einfach, schmäler, viel stärker papillös. Die Ordnung der weniger zahlreichen Warzen eine andere. Das E. Lunaeanum (cui?) ist mir unbekannt, meines Wissens unbeschrieben. — Costa Rica und Chiriqui. Warscewicz.

94. EPIDENDRUM PHYMATOGLOSSUM Rchb. fil. in v. Mohl et v. Schlechtendl. Bot. Zeit. 1852. 731.

Pseudobulbis — apice attenuatis, foliis ternis oblongis acutis basi cuneatis, pergameneis, internodio inter inferiora elongato, spatha membranacea acuta abbreviata, pedunculo elongato, plurifloro, bracteis triangulis abbreviatis (uti in E. varicoso), pedicellis elongatis, perigonii phyllis oblongo-obovatis acutis, lateralibus internis spatulatis, acutiusculis, nunc apice trilobis, labello basi cuneato-unguiculato, lobis lateralibus linearibus retusis abbreviatis, divaricatis, lobo medio rhombeo sessili, apice emarginato, marginibus lateralibus anterioribus hinc lobulato, callo unguem tegente depresso, apice bilobo a medio ad apicem usque sulcato, velutino, toto labello excepto margine ipso varicoso papuloso, varicibus quidem abbreviato lamellosis, androclinii lobo postico angusto ligulato, obtuso, integerrimo.

Mexico.

95. EPIDENDRUM MICHUACANUM La Llave. LO. 21. Huc Lindl. l. c. 72.

E. foliis in pseudobulbos pyriformes ternis quaternisve ensiformilanceolatis conduplicatis, scapo ramosissimo, sepalis petalisque angustioribus cuneato-lanceolatis, labelli tripartiti lacinia intermedia reniformi biloba.

Wild in Mexico; on the mountains of Mechoacan, and near Valladolid — La Llave. — Pseudobulbs large. Flowers small, scentless, pale yellow, with a white lip. Seems very like E. varicosum, but the leaves are said to be a foot long.

96. EPIDENDRUM IONOSMUM Lindl. in Bot. Reg. 1838. misc. 87. Huc Lindl. l. c. 73.

E. pseudobulbis diphyllis, scapo apice simplici racemoso brevioribus, sepalis petalisque coriaceis obovatis concavis obtusis subaequalibus, labelli trilobi liberi lobis lateralibus elongatis erectis oblongis columnam amplexantibus apice rotundatis denticulatis intermedio subrotundo emarginato rugoso crispo, callo disci duplici elevato altero angustiore apici propiore, columna acute auriculata.

Wild in Demerara — Loddiges (v. v. c.) — The blossoms are rather large, a dull

reddish green, with the lip delicately streaked with deep lilac. The odour that of the sweetest violets. It is very near E. selligerum n. 26 from which its emarginate not acute lip seems to distinguish it.

97. EPIDENDRUM PYRIFORME Lindl. in Bot. Reg. 1847. t. 50. Huc Lindl. l. c. 74.

E. pseudobulbis obpyriformibus aggregatis diphyllis, foliis coriaceis lanceolatis acutis scapo subbifloro longioribus, sepalis petalisque lanceolatis acutis, labelli lobis lateralibus subrecurvis acutis integerrimis, intermedio subrotundo glabro retuso, callis 2 maximis parallelis apice subliberis in unguem.

Wild in Cuba — Loddiges (v. v. c.) — Leaves unusually thick and fleshy, about four inches long on little pseudobulbs, which look like inverted pears. Notwithstanding its diminutive stature, the flowers are fully two inches and a half in diameter, with reddish yellow sepals and petals, and a pale straw-coloured lip veined with crimson.

98. EPIDENDRUM BIFIDUM Aublet. LO. 17. Bot. Reg. t. 1879. Redouté liliac. t 84. Huc Lindl. l. c. 75.

E. foliis in pseudobulbos subternis oblongis coriaceis, scapo ramoso foliis multo longiore, sepalis oblongis acutis petalisque lineari-spathulatis patentibus, labelli cuneati unguiculati lobis lateralibus rotundatis brevibus conduplicatis, intermedio maximo apice dilatato subreniformi sulcato, disci callo ovato lobato in lineam elevatam producto.

Helleborine fl. papilionaceo Plum. ic. 186. f. 1.
Epidendrum papilionaceum West. S. Cruz. 230.
Epidendrum auropurpureum LO. 14.
Epidendrum atropurpureum Willd sp. pl. 115.

Wild in the West Indies; Hispaniola — Plumier; St. Christopher's, St. Bartholomew's — Swartz; St. Thomas — Riedley (v. v. c.) — Sepals and petals light green, with a dull purple spot near the end. Lip rose-colour, with the lateral lobes yellow. E. auropurpureum does not seem to be distinguishable.

99. EPIDENDRUM DICHROMUM Lindl. in Bot. Reg. 1843. misc. 119. Huc Lindl. l. c. 76.

E. pseudobulbis ovato-fusiformibus diphyllis, foliis ligulatis planis apice rotundatis racemo laxo paucifloro brevioribus, sepalis lineari-lanceolatis, petalis obovato-lanceolatis latioribus, labelli lobo medio obcordato pluries costato cum mucrone, lateralibus duplo brevioribus rotundatis apice patulis, columna obtuse auriculata.

Wild in Pernambugo — Quesnel (v. v. c.) — Flowers pure white, with a rose-coloured lip, yellow and downy at the base.

100. EPIDENDRUM JENISCHIANUM Rchb. fil. Van Houtte Flores des Serres IX. p. 98. Bonplandia II. p. 89

Pedunculo racemoso ramoso laevi, bracteis squamaeformibus acutis minutissimis, pedicellis in ovaria inflata sensim abeuntibus, sepalis oblongo-spatulatis acutiusculis, tepalis angustius cuneatis, dein duplo latioribus ovalibus, labello libero trilobo, lobis lateralibus ligulatis apice erosulis incurvis, lobo medio cuneato oblongo bilobo cum apiculo in sinu, lineis sex carinatis a portione antebasilari per unguem lobi medii excurrentibus, venis in lobo medio elevatulis, gynostemii angulo utroque auriculato, auriculis inflexis, superadditis setis erectis pone antheram emarginatam.

Espèce magnifique à fleurs de la grandeur de celles de l'Epidendrum bifidum, Aublet. Ces fleurs sont d'un blanc rosé à l'extérieur, la face intérieure est d'un beau lilas, le labelle est couvert de veines pourprées. — Introduite de Bahia, elle a d'abord été cultivée par M. Kramer, jardinier-en-chef de M. le sénateur Jenisch, l'un des amateurs d'Orchidées les plus compétents, et dont les belles cultures ont été pendant longtemps sans rivales en Allemagne. — Nous nous sommes empressé de donner à cette belle espèce le nom célèbre de son possesseur.

101. EPIDENDRUM HANBURII Lindl. in Bot. Reg. 1844. misc. 80. Hue Lindl. l. c. 77.

E. pseudobulbis ovatis, foliis ensiformibus coriaceis scapo racemoso multo brevioribus, sepalis petalisque spathulatis unguiculatis patentibus, labelli lobis lateralibus falcatis obtusis nanis erectis intermedio oblongo bilobo venis elevatis dichotomis sulcato, disci callo excavato in lineam rectam elevatam exeunte, columna aptera.

Wild in Mexico — Galeotti; Sierra S. Pedro Nolasco — Jurgensen 829 (v. v. c. et s. sp. comm. cel. Galeotti). — Leaves very coriaceous, shorter than the raceme, which is about two feet long. Sepals and petals deep dull purple; lip pale rose, with crimson radiating veins; lateral lobes white at the tip and curved over the column.

102. EPIDENDRUM PHOENICEUM Lindl. in Bot. Reg. 1841. misc. 120. Sert. Orch. t. 46. Huc Lindl. l. c. 78.

E. pseudobulbis subrotundo-ovatis diphyllis, foliis anguste oblongis coriaceis erectis, scapo paniculaque scabris, sepalis petalisque subaequalibus coriaceis obovato-lanceolatis, labelli laciniis lateralibus oblongis erectis obtusis apice recurvis intermedia maxima membranacea subrotunda undulata emarginata, disci callo duplici carnoso apice libero, columna acute auriculata.

(B) *vanillosmum*. Lip white spotted with rose.

Epidendrum phoeniceum vanillosmum V. Houtte Fl. des Serres 1848. 306 ic.
Epidendrum Grahami Hook in Bot. Mag. t. 3885.

Wild in Cuba; in the forests of Guántanamo — Linden (v. v. c. et s. sp. comm. cel. Linden; B s. c. in hb. Hooker). — Panicle from two to three feet high, flowers large, scentless. Sepals and petals leathery deep purple, a little mottled with green specks both inside and out. Lip nearly an inch and a half long, of the clear bright violet of Cattleya labiata, and with the same deep crimson veins and stains in the middle. The variety B is said to be deliciously perfumed with Vanilla.

Obs. Huc pertinebit, nisi E. plicatum, quod minus crediderim:
Epidendrum oblongatum (Tab. 80) A. Rich. in Ramon de Sagra n. 239.

Pseudobulbis ovoideo oblongis, apice attenuat.s 1—2 phyllis, vaginis dissectis obtectis; foliis lanceolatis obtusis, coriaceis, dorso carinatis; scapo terminali bipedali, simplici; floribus pedicellatis, acutis, basi sensim angustatis et subunguiculatis, brunneo vinosis; labello trilobo, lobis lateralibus oblongo-lanceolatis acutiusculis, gynostemio applicatis longioribusque, intermedio majori subrotundo, basi unguiculato, emarginato-bilobulato, undulato, ad basin cristis 4 longitudinalibus notato; gynostemio apice trialato, aliis parvulis obtusis.

Cuba.

103. EPIDENDRUM ATROPURPUREUM W. Sp. sub 115. fid. Rchb. fil. Huc: *Epidendrum macrochilum* Hook. in Bot. Mag. t. 3534. Bateman Orch. Mex. t. 17. Morren in Ann. Gand II. p. 365 ic. Van Houtte Flores des Serres 1848 372 ic. Lindl. l. c. 79.

E pseudobulbis ovatis rugosis diphyllis, foliis oblongis coriaceis racemo brevioribus, rachi pedicellisque angulatis, sepalis petalisque obovato-lanceolatis patentibus apicibus incurvis, labelli lobis lateralibus ovatis acutis in columnam incumbentibus, intermedio maximo obcordato laevi, disci callo bilineato obsoleto, columna alata.

Wild in Guatemala, on the coast with Cattleya Skinneri — Skinner; Panama and W. Colombia — Cuming; Caracas, Sa. Martha — Purdie (v. v. et s. sp.) — A very fine plant; one variety having green sepals and a white lip, the other having purple sepals with a deep rose-coloured lip. Vulgarly „Boca del Dragon", „Dragon's mouth", in Guatemala. Flowers the largest in this genus.

Huc: *Epidendrum atropurpureum* W.! Cymbidium cordigerum Humb., Kth. Epid. macrochilum Hook. Rchb. fil. in Bonpl. II. 19. Man hat am Namen „atropurpureum"

gemäkelt. Er ist viel besser gewählt, als Miltonia candida, die candida heisst, weil ein Bischen Lippe weiss ist, andere Beispiele zu übergeben. Dass man, um Sir W. Hook. die Priorität des E. macrochilum zu lassen, das E. atropurpureum zu E. bifidum zog, ist doch etwas kühn.

Epidendrum atropurpureum W. *b. roseum* Rchb. fil. in Bonpl. II. 19. Merida. 5000'. Dec. Am Grunde der Narbe erscheinen bei diesem und vorigem bisweilen 2 Schwielen, welche anderwärts fehlen. Herr Wagener hält beide Formen für verschieden, ich kann keinen Character erspähen.

Epidendrum atropurpureum W. Rchb. fil. in Bonpl. II. 281. Santa Marta. Juli. Nr. 991. Schlim.

Epidendrum atropurpureum b. *roseum* Rchb. fil. Pescat. t. 257.

Epidendrum Duboisianum Brong. ms. in Ramon de Sagra 239.:

E. pseudobulbis —, foliis —, floribus maximis; sepalis patentibus oblongis aequilongis, acutis, apice incurvis, externe subviridibus, facie interna brunneo vinosis, petalis aequilongis spathulatis, basi magis angustatis concoloribus; labello longiore lilacino, trilobo, lobis lateralibus oblongis, falcatis, obtusis, columnam obtegentibus, intermedio maximo, suborbiculari, apice emarginato, basi intensive purpureo in disco lineis 3 parallelis elevatis, gynostemio erecto, postice convexo, antice plano, margine dilatato; anthera planiuscula et subconcava, cordata, lutea.

Cuba. — Esta specie nos parece una variedad con grandes flores del E. phoeniceum que ofrece suma diversida de formas. Hemes descrito los caracteres por con individuo que florecia en casa de M. Pescatore.

§ 3. *Diacrium.* Lindley, in Hooker's Journal of Botany III. 81.

This section at first sight seems to merge in Encyclium; for the chief difference appears to consist in the stem being fusiform and leafy at the end, which is but a small modification of the pseudobulbous condition. In addition, the lip of E. bicornutum is not parallel with the column, and has two deep pits on the under side, corresponding with the same number of fleshy elevated triangular plates on the upper side.

104. EPIDENDRUM BIDENTATUM LO. p. 98. Huc Lindl. l. c. 81.

E. foliis obovato-lanceolatis apice recurvis supra v. sub pseudobulbo nascentibus, racemo terminali erecto paucifloro, sepalis lanceolatis petalisque angustioribus patentibus, labello semilibero rhomboideo angulis utrinque unidentato.

Wild in Mexico — herb. Pavon (v. olim s. sp.). — The only memorandum I possess regarding this species is a sketch of its flower, made many years ago from a specimen in the Lambertian herbarium. It seems very near E. bicornutum, but it has petals narrower, not broader than the sepals, and the side lobes of the lip are little more than projecting teeth.

105. EPIDENDRUM BICORNUTUM Hooker Bot. Mag. t. 3332. Huc Lindl. l. c. 82.:

E. foliis lineari-oblongis obtusis coriaceis, caule cormiformi, sepalis ovato-lanceolatis, petalis conformibus latioribus, labelli trilobi lobo medio elongato lanceolato acuto latioribus obtusiusculis basi lamellis 2 triangularibus aucto.

Wild in Trinidad — Hooker; Demerara — Schomburgk 429 (v. v. c. et s. sp.). — Flowers large and white, slightly tinged with rose-colour. Lip yellow at the base with some crimson specks on the tongue like middle lobe. According to Schomburgk, the petals are also spotted with crimson, which is not the case with the cultivated plants.

106. EPIDENDRUM BILAMELLATUM Rchb. fil. MSS.: minus, labelli lobis medianis ob-

tusis, lobo medio triangulo acuto, lamellis geminis infra excavatis ovatis obtusis, antrorsis, contiguis. — Caracas Wagener! Panama P. Chagres Behr!

107. EPIDENDRUM BIGIBBEROSUM Rchb. fil. MSS.: minus, labelli lobis medianis acutangulis antrorsis, lobo medio oblongo-ovali acuto, callis geminis infra excavatis triangulis, extrorsis distantibus. — E Guatemala in hort. Schill. introduct.

§ 4. *Hormidium*. Lindley in Hooker's Journal of Botany III. 81.

We here find a set of creeping species, with true pseudobulbs, sessile (or nearly sessile) flowers, and a lip adnate to the column. They differ from Aulizeum and Osmophytum in the pseudobulbs, and in the flowers not being in conspicuous racemes; from Lanium in their flowers not being panicled and woolly; from Spathium, Amphiglottium, and Euepidendrum in their stems not being leafy.

(Tota sectio superflua ad Aulizea pertinet!)

108. EPIDENDRUM PYGMAEUM Hooker Journal of Botany I. 49. t. 118. Bot. Mag. t. 3233. Huc Lindl. l. c. 84.:

E. foliis brevibus lanceolatis subundulatis acutis, floribus solitariis, sepalis ovato-lanceolatis acuminatis lateralibus majoribus labello subtus adnatis, petalis angustioribus acuminatis incurvis, labelli trilobi columnae adnati laciniis lateralibus rotundatis erectis intermedia triangulari acuminata.

Epidendrum uniflorum Lindl. in Bot. Reg. 1839. Misc. 13.

Wild in Brazil — Harrison; Jamaica — Hooker; Mexico — Barker (v. v. c.). — Flowers small, yellowish green, one or two together. I have nowhere found a wild specimen of this.

109. EPIDENDRUM MISERUM Lindl. in Bot. Reg. 1841. Misc. 62. Huc Lindl. l. c. 85.:

E. caulibus ovalibus exuviatis compressis aggregatis, foliis....., scapo brevissimo subbifloro, spatha bivalvi pedunculis subaequali membranacea, sepalis ovatis acutis, petalis linearibus, labelli trilobi lobis lateralibus rotundatis inconspicuis, intermedio truncato emarginato callis nullis (?).

Wild in Mexico; near Oaxaca — Loddiges (v. v. c.). — Pseudobulbs about half an inch high. Scape, peduncules, and ovaries, taken together, about the same length. Flowers a dull, dingy, greenish brown, not unlike those of E. musciferum.

110. EPIDENDRUM CAESPITOSUM Pöppig and Endl. N. G. et Sp. Pl. II. t. 101. Huc Lindl. l. c. 86.:

E. pseudobulbis subcylindricis diphyllis, foliis ovali-lanceolatis acutis, floribus in sinu folii paucis brevissime spicatis aut sessilibus, sepalis petalisque subaequalibus lanceolatis, labello integro transverso reniformi lateribus rotundato breviter apiculato nudo, capsula subrotunda triptera.

Coelogyne triptera Ad. Brongn. Voy. Duperr. t. 42. A.

Wild in Peru; on trees in dense forests between Cuchero and Pampayaco — Pöppig. — Flowers hardly a line long, green, with a white lip.

111. EPIDENDRUM SERPENS Lindl. in Benth. Pl. Hartweg. p. 149. Huc Lindl. l. c. 87.:

E. pseudobulbis oblongis 2—3-phyllis, foliis ovato-lanceolatis acutissimis, sepalis ovatis, petalis lineari-lanceolatis, labello cochleato serrulato laevi, capsula ovali triquetra.

Wild in Peru; mountains near Chiquiribamba, creeping among Lichens — Hartweg (v. s. sp.). — Flowers rather large, deep violet; the pseudobulbs so crowded together, that they must form a carpet when growing wild. It is remarkable, that no straps appear to be connected with the pollen-masses in this species, but some powdery matter is formed in its stead. The capsule is larger than the leaves.

§ 5. *Aulizeum*. Lindley in Hooker's Journal of Botany III. 81. Aulizea Salisbury in Hort. Soc. Trans. I. 261.

Among the species whose lip is united to the column, are those which, like E. ciliare, have that organ broken up into long and beautiful fringes, or at least split into three pieces; they have a long horn-like stem, leafy only at the end, and their flowers invariably grow in racemes; these form the subgenus Aulizeum, along with others of less conspicuous beauty, but similar in those respects. They pass into Osmophytum by E. fallax and its allies, which may be almost equally placed in one subgenus or in the other.

a. Labellum integrum.

112. EPIDENDRUM CORIOPHORUM (Stenoglossum coriophorum Humb. Kth. Rchb. fil. in Bonpl. II. 20.

Stenoglossum subulatum Lindl. Hook. Ic. I. 837. t. LI.:

Labello petalisque subulatis, sepalis ovato lanceolatis avenis.

Lindl. MSS. — On trees near Pichitagua, on the western declivity of Pichincha. Prof. W. Jameson. — Caulis spithamaeus, inferne ramosus, compressus, vaginatus, apice uni-bifoliatus; foliis lineari-oblongis; obscure striatis, crassiusculis. Pedunculus solitarius, terminalis, fere spithamaeus; inferne vagina longa tectus. Spica elongata multiflora. Flores resupinati. Perianthium connivens. Sepala ovato lanceolata, acuminata, trinervia. Petala labellumque lineari-subulata. Columna urceolata, inferne cum labello connata. Anthera reniformis, 4 locularis. Pollinia 4 libera, basi solummodo glandula unita.

113. EPIDENDRUM SERIATUM Lindl. l. c. sub 188.:

E. panicula filiformi laxa, pedunculo elongato distanter vaginato, bracteis minimis, ovariis longipedunculatis, sepalis lineari-lanceolatis acutis, petalis filiformi-spathulatis, labello lineari oblongo acuto seriebus 5 verrucarum ornato, clinandrio integro,

Wild in Mexico — Bateman (v. v. c.). — A thin panicle at the end of a long slender peduncle, and dirty yellow flowers, are very peculiar features among the present section of Amphiglottis.

114. EPIDENDRUM SERRULATUM Rchb. fil. MSS.: *Cymbidium serrulatum* Sw.

115. Nonne potius huc Pinelia hypolepta Lindl., quam ad Restrepias? Forsan.

b. Labellum tripartitum.

116. EPIDENDRUM CILIARE Linn. Sp. Pl. 1349. Jacq. Amer. 224. t. 179. f. 89. Swartz Nov. Act. Ups. VI. 69. Ker in Bot. Reg. t. 784, LO. p. 100. Huc Lindl. l. c. 90.:

E. foliis oblongis obtusis, bracteis spathaceis ovario brevioribus, sepalis petalisque linearibus acuminatis, labelli tripartiti lobis lateralibus pectinatis incisis, intermedio lineari acuminato.

(A) Sepals and petals narrow. Middle lobe of lip setaceous, longer than the laterals.

Auliza ciliaris Salisbury in Hort. Trans. l. c.

(B) *cuspidatum*. Middle lobe of lip linear-lanceolate, not much longer than the laterals.

Epidendrum ciliare Bot. Mag. t. 463.

Epidendrum cuspidatum Lodd. Bot. Cab. t. 10. Ker in Bot. Reg. 10. t. 783. LO. p. 101.

(C) *viscidum*. Leaf narrower, more channelled. Bracts glutinous. Middle lobe of lip setaceous, longer than the laterals. Flowers smaller.

Epidendrum viscidum Lindl. in Bot. Reg. 1844. Misc. 190.

Wild in Tropical America. A. Colombia, on rocks near Guaduas on the descent to Honda, in the province of Bogota — Hartweg, West Indies — Jacquin, Swartz, Hooker; Mariquita — Triana 126; B. Dominica — Imray in hb. Hooker; C. Mexico, on porphyry roks near Oaxaca — Galeotti 5087 (v. v. c. et s. sp.). —

Flowers large, white, changing to straw-colour; sometimes greenish except the lip. A careful examination of numerous specimens, both wild and cultivated, satisfies me that no limits whatever exist among the above supposed species. It is evident that the plant varies much according to age, health, and other circumstances, from bearing a single flower to forming a raceme a foot and a half long, bearing 28 flowers. It sometimes appears to have sepals only half the length of the lip (Rchb.) but I have not seen it in that state. — Rchb. fil. in Bonpl. II. 20. Caracas. 3500'. October. Wagener.

117. EPIDENDRUM OERSTEDII Rchb. fil. in v. Mohl et v. Schlechtendl. Bot. Zeitg. 1852. 937.

Foliis ovatis acutiusculis, binis, spica pauciflora, bracteis angustis ligulatis, obtusiusculis ovaria pedicellata vix dimidio aequantibus, perigonii phyllis subaequalibus, lanceolatis, acuminatis, lateralibus internis paulo brevioribus apice subulatis, labello trilobo, lobis lateralibus obtuse et oblique rhombeis, integerrimis, margine postico et externo magis curvatis, quam interno et antico, lobo medio sublongiore ligulato dein dilatato, apiculato subulato, callis duobus obtuse triangulis in labelli basi, androclinii lobo postico denticulato.

Blüthen so gross wie bei E. ciliare; gelb nach beigefügter Farbenskizze. San Miguel in Costa Rica. Oersted.

118. EPIDENDRUM COSTARICENSE Rchb. fil. in v. Mohl et v. Schlechtendl. Bot. Zeitg. 1852. 937.

Pseudobulbis fusiformibus crassis abbreviatis, triarticulatis, foliis ovatis acutiusculis, solitariis seu geminis, racemo nunc flexuoso, pauci — plurifloro, bracteis angustis ligulatis acutiusculis seu obtusis ovaria pedicellata non dimidio quidem aequantibus, p. ph. lanceolatis acuminatis subaequalibus, labelli lobis lateralibus triangulis, margine postico recto, sublanceolato, lobo medio anguste ligulato, acuto apice vix dilatato, apice subulato, lobis lateralibus subduplo longiore, callis 2 in basi obtuse triangulis, androclinii lobo postico denticulato.

Blüthen so gross, wie bei E. cuspidatum. Hüllblätter grün, Lippe gelbweiss. Cartago, El Viego. Oersted.

119. EPIDENDRUM FALCATUM Lindl. Taylor's Annals of Natural History Feb. 1840. Huc Lindl. l. c. 91.:

E. caule ramoso carnoso membranis laxis imbricatis vaginato, foliis solitariis carnosis falcatis ovato-lanceolatis canaliculatis acutis, fasciculis florum subsessilibus, sepalis petalisque lineari-lanceolatis patentissimis, labelli tripartiti basi bituberculati laciniis lateralibus oblongis acutis dimidiatis integris, intermedia lineari-lanceolata paulo longiore.

Epidendrum latifolium Richard and Galeotti Orch. Mex. n. 57.
Epidendrum Parkinsonianum Hooker in Bot. Mag. t. 3778.
Epidendrum aloifolium Bateman Orch. Mex. and Guat. t. 25.

Wild in Mexico; near Oaxaca, on rocks and loose stones — Hartweg (v. s. sp.). — A species with fleshy branching short stems, long channelled fleshy falcate leaves, and large pale yellowish flowers, springing from within a long pale yellowish green membranous spathe. The number of flowers varies from two to four or more in each spathe.

120. EPIDENDRUM VIVIPARUM Lindl. in Bot. Reg. 1841. Misc. 27. Huc Lindl. l. c. 92.:

E. caule fusiformi diphyllo, pedunculo elongato squamato pluries breviore, foliis oblongis horizontalibus obtusis, racemo paucifloro, bracteis spathaceis canaliculatis ovario cuniculato aequalibus, sepalis petalisque linearibus acuminatis patentissimis, labelli trilobi basi bicallosi laciniis

lateralibus subrotundo-rhomboideis, intermedia lineari spathulata acuminata convexa triplo longiore.

Wild in Demerara — Loddiges (v. v. c.). — This has small white flowers closely arranged at the end of a flower-stem two feet long; and the latter when old produces young plants at almost every joint. The flowers have no smell, and are not half the size of the smallest state of E. ciliare.

121. EPIDENDRUM CLAVATUM Lindl. in Bot. Reg. t. 1870. Huc Lindl. l. c. 93.

E. caule clavato in pseudobulbum ovalem desinente diphyllum, foliis lanceolatis patulis racemo simplici subaequalibus, bracteis ovatis canaliculatis acutis ovariis infimis brevioribus, sepalis petalisque lanceolato-linearibus aequalibus, labelli tripartiti basi bicallosi laciniis acutis integris, lateralibus ovalis intermedia unguiculata ovata acuminata, clinandrio indiviso serrulato.

Wild in Camana — Hanchmann; Sa. Martha — Purdie (v. v. c. et s. sp. comm. cel. Hooker). — Flowers green, with a white lip. Spathaceous bracts reddish.

Huc: *Epidendrum purpurascens* Focke in Tijdsch. Wis- en Natuurk. Wetensh. uitg. door de 1. Kl. v. h. K. Neederl. Deel IV. p. 64.

Foliis in pseudobulbo elongato pedunculato solitariis lineari-lanceolatis, scapo radicali vaginato, sepalis petalisque conformibus breve acuminatis margine revolutis patentibus concoloribus, labelli trilobi lobis lateralibus ovato-falcatis acutis divaricatis, intermedio unguiculato-ovato acuto recurvo, disco bicalloso.

Radices fibrosae. Rhizoma repens. Folia solitaria, lineari-lanceolata, in pseudobulbum attenuata, glabra, coriacea, apice recurva. Pseudobulbi fusiformes, ovato-oblongi vel ovati, compressi, articulato-pedunculati, juniores vestiti, adultiores rugosi, purpurascentes. Scapus radicalis s. e rhizomate ortus, racemosus, erectus, vaginatus, articulatus, subsecundus, 4—8-florus. Bracteae inferiores amplae, vaginantes, alternae, conduplicatae, totum scapum vestientes; — florales ovatae pedunculum fere ad dimidium usque amplexantes, pallide purpureae. Sepala lineari-spathulata, breve acuminata, margine revoluta, extus purpurascentia, intus purpureo-viridescentia, petalis acutis convexis latiora, patentia, 2 centim. longa. Labellum trilobum, resupinatum, album; lobis lateralibus ovato-falcatis acutis divaricatis, intermedio spathulato s. unguiculato, late obovato acuminato, recurvo; disco bicalloso, callo ovato erecto nitente in cujusque lobi lateralis basi. Columna elongata, teres, cum ovario continua, clinandrii margine postico leviter fimbriato antheram superante. Anthera subquadrata, immersa, bilocularis, loculis bipartitis. Pollinia 4, dimidiato-semiorbicularia, compressa. Caudiculae 4 breves replicatae. Capsula ovata, longe rostrata. Tota planta purpurascit. — Habitat ad truncos arborum in sylvis ad flumina Surinamе et Commewyne superiora. Florebat Novembri et Decembri. — Post nuptias flores saepius marcescunt, bractea scapi suprema dilatatur et sensim in folium excrescit; articulus infra basin istius bracteae tumefactus paullatim in pseudobulbum mutatur, et racemus emarcidus remanet in axilla folii novi, bracteis reliquis pseudobulbum novum vestientibus. Vidi varietatem, cujus labelli lobus intermedius longius unguiculatus erat et apice attenuatus; in caeteris simillimam.

122. EPIDENDRUM KERMESINUM. Huc Lindl. l. c. 94.

E. caule ramoso ramis crassis divaricatis in pseudobulbos ovato-fusiformes mutatis, foliis 4—5 lanceolatis canaliculatis acuminatis falcatis panicula laxa brevioribus, sepalis petalisque minoribus lineari-oblongis obtusis carnosis, labelli semiadnati lobis lateralibus nanis rotundatis, intermedio lineari obtuso sulcato.

Wild in the Caraccas; S. Miguel, Sierra Nevada de Sa. Martha — Purdie; New Grenada in the province of Rio Hacha, at the height of 6000 to 9000 feet, March —

Schlim 985 (v. s. sp. comm. cel. Linden) — Pseudobulbs like those of E. erubescens. Petals and sepals red, yellow at the point; lip white, spotted with crimson. — Linden.

123. EPIDENDRUM ERUBESCENS Lindl. in Hook. Journ. III. 87. Bateman Orch. Mex. et Guat. t. 32. Huc Lindl. l. c. 95.:

E. pseudobulbis fusiformibus diphyllis, foliis oblongis acutis scapo pluries brevioribus, panicula ampla flexuosa, petalis unguiculatis sepalisque oblongis obtusis, labelli trilobi lacinia intermedia venis 3 elevatis subrotunda, lateralibus obovatis multo majore.

Wild in Mexico — Grisebach 14; Zuccarini; on oaks at the heights of 7500 to 8500 feet, near Oaxaca — Galeotti 5007 (v. s. sp.). — A magnificent plant, with very large panicles of delicate rose-coloured flowers as large as a shilling.

124. EPIDENDRUM POLYSTACHYUM H. B. K. vol. I. 352. LO. 20. Huc Lindl. l. c. 96.:

E. foliis oblóngis obtusis striato-nervosis geminatim in pseudobulbum insidentibus, scapo polystachyo, sepalis reflexis suboblongis acutis, petalis lanceolato-spatulatis, labelli trilobi lobis lateralibus irregulariter obovatis crenulatis: intermedio minore profunde emarginato.

Wild in Peru; in the cool region of the Andes of Pasto, between the village of Yayanquer and the R. Guaitara; also in the milder climate of Loxa, in the Cinchona districts, at the height of 5400 to 6480 feet — Humboldt and Bonpland. — Scape about two feet high. Spathes withering. Spikes solitary, two or three together, alternate, distant, about one inch and a half long, spreading. Flowers yellow. — H. B. K.

125. EPIDENDRUM GRAMMATOGLOSSUM H. G. Reichenbach in Linnaea XXII. p. 837. Huc Lindl. l. c. 97.:

E. pseudobulbis teretibus folio canaliculato recurvo gramineo duplo brevioribus, scapo stricto folio longiore, spatha brevi glumacea, bracteis ovatis membranaceis acuminatis, sepalis lineari-lanceolatis petalisque angustioribus acuminatis, labello hastato lobis lateralibus recurvis obtusis intermedio triangulari acutissimo basi callo retuso concavo laevi mucronulato, clinandrii lobis lateralibus acuminatis dorsali breviore obtuso.

Wild in Venezuela; near Sa. Anna, in Truxillo, at the height of 5000 feet — Funk and Schlim 739 (v. s. sp. comm. cel. Linden). — A slender species, from six to nine inches from the ground to the tip of the raceme. Flowers yellow, marked on either side of the remarkable lip with from three to four deep red spots. — Rchb. in Bonpl. III, 68. Blüthe weisslich. S. Pedro. 5050'. Ocanna. Wagener.

126. EPIDENDRUM TIPULOIDEUM. Huc Lindl. l. c. 98.:

E. pseudobulbo gracili 2-phyllo, foliis linearibus gramineis racemo erecto angulato basi spathaceo longioribus, bracteis obsoletis, sepalo dorsali lineari reflexo lateralibus lanceolatis carina alata, petalis erectis incurvis filiformibus, labelli tripartiti laciniis lateralibus angustis elongatis acutis cordatis intermedia lanceolato acuto basi bicalloso, clinandrii lobis lateralibus bilobis dorsali deficiente.

Wild in Venezuela; Campanara in the province of Carabobo, at the elevation of 1000 feet — Funk and Schlim 575 (v. s. sp. comm. cel. Linden). — A small slender grassy plant, scarcely more than six inches high. „Flowers white and brown", appearing in May, small, membranous, nine to ten in a raceme.

127. EPIDENDRUM MORITZII H. G. Reichenbach in Linnaea XXII. 837. Huc Lindl. l. c. 99.:

E. pseudobulbo lineari monophyllo, folio oblongo-lineari obtuso, racemo gracili multifloro nutante e spatha herbacea coarctata erumpente, sepalis lanceolatis trinerviis petalisque linearibus uninerviis membrana-

ceis acutis, labelli tripartiti basi 3-callosi laciniis lateralibus semiovatis acutis falcatis serrulatis, intermedia lineari acuta longiore, clinandrio immarginato.

Wild in Venezuela; in the province of Merida — Moritz; at the height of 5000 feet — Funck and Schlim 1053; Ocanna — Schlim 742 (v. s. sp. comm. cel. Linden) — A slender species, with very membranous flowers Leaf three inches long. Spathe more than half as long Raceme a foot long. Flowers yellow and white. — Rchb. fil. in Bonpl. II. 20. Merida. Wagener.

128. EPIDENDRUM STRAMINEUM. Hue Lindl. l. c. 100.:

E. spatha magna ampla, spica multiflora nutante, bracteis minimis acutis, sepalis lanceolatis acutis, petalis angustioribus nunc obtusioribus, labelli lamina libera triloba lobis lateralibus rotundatis apice producto nunc acuto nunc obtuso margine nunc serrulato lobo medio ligulato acuto, tuberculis 4—5 in basi labelli.

Wild in tropical America; Pamplona, at the height of 8 500 feet — Schlim; Ocanna — Schlim 742 (v. s. sp. comm. cel. Linden). — Leaf solitary, rather long. Flowers yellowish green; ground of the lip purple. — Rchb.

Epidendrum stramineum Lindl. Rchb. fil. in Bonpl. III. 68. Ocanna Wagener.

— Rchb. fil. in Bonpl. II. 282. Pamplona: la Baja. Februar. 8—9000′ n. 1172. Schlim.

129. EPIDENDRUM PARVILABRE Lindl. in Benth. Pl. Hartw. p. 150. Huc Lindl. l. c. 102.

E. folio oblongo suboblique emarginato caule longiore, racemo simplici multifloro cernuo folio multo longiore e spatha erumpente 2—3-phylla, sepalis oblongis obtusis lateralibus duplo latioribus 5-nerviis, petalis sepalo dorsali angustioribus, labelli tripartiti laciniis lateralibus falcatis acutissimis intermedia angustissima apice cuneata triloba, axi elevata basi bicallosa.

Wild in Peru: near El Porotillo and El Sisme — Hartweg (v. s. sp). — This species has a spathe like a Spathium, but it has pseudobulbs instead of leafy stems. Flowers small, dense, with minute acute bracts, colour unknown.

130. EPIDENDRUM PARALLELUM. Huc Lindl. l. c. 103.:

E. rhizomate crasso repente, pseudobulbis angustis teretibus folio lineari oblongo marginibus parallelis 3-plo brevioribus, racemo stricto basi vaginato folio longiore, sepalis petalisque lineari-lanceolatis, labelli tripartiti laciniis lateralibus semiovatis acutis incurvis intermedia lineari acuminata latiore ungue ecalloso apice concavo pubescente, clinandrio obtuse 3-partito.

Wild in Sa. Marta: rocks at S. Sebastian, in the Sierra Nevada — Purdie (v. s. sp. comm. cel. Hooker). — The edges of the obtuse leaves are almost exactly parallel. Flowers the size of E. inversum. The total absence of calli from the lip is remarkable.

131. EPIDENDRUM VENOSUM LO. p. 99. Huc Lindl. l. c. 104.:

E. pseudobulbis angustis fusiformibus, foliis ensiformibus scapi longitudine, racemo 4—5-floro, sepalis lineari-lanceolatis petalisque angustioribus patentissimis, labello semilibero tripartito: laciniis lateralibus ovatis acutis intermedia subrotunda acuta multo majore, callo baseos lineisque tribus disci subramosis elevatis.

Wild in Mexico: on rocks near Morelia — Hartweg (v. s. sp.). — Lip white, with raised violet veins.

Huc: *Epidendrum ensicaulon* Richard and Galleotti Orch. Mex. n. 34. Lindl l. c. sub 30.

E. „pseudobulbis diphyllis, foliis oblongo-lanceolatis obtusis, scapo

terminali compresso ensiformi 2—3-floro, labello luteo trilobo: lobo intermedio multo majori late cordato apice acutiusculo."

Wild in Mexico — Galeotti.

c. Labellum trilobum (lobis saepius rotundatis).

132. EPIDENDRUM SAXATILE Lindl. in Hook. Journ. III. 84. Huc Lindl. l. c. 105.:

E. caulibus fusiformibus apice diphyllis, foliis lineari-lanceolatis racemo paucifloro brevioribus, floribus membranaceis, sepalis oblongis petalisque filiformibus labello multo minoribus, labelli subrotundi trilobi laciniis rotundatis subrepandis intermediam bilobam reniformem serratam imbricantibus.

Wild in Brazil; on rocks in the Serra de Piedade — Martius, (v. s. sp. in hb. Martius). — Whole plant less than six inches high. Flowers membranous, reddish-purple with darker longitudinal streaks, as large as in E. Schomburgkii.

133. EPIDENDRUM PRUINOSUM Richard and Galeotti Orch. Mex. n. 41. Huc Lindl. l. c. 106.:

E. „pseudobulbis globosis 1-phyllis, foliis lanceolato acutis, floribus luteis, racemo simplici, labello adnato trilobo: lobis lateralibus angustis divaricatis, intermedio obcordato."

Wild in Mexico — Galeotti.

134. EPIDENDRUM RHYNCHOPHORUM Rich. and Galeotti Orch. Mex. n. 37. Huc Lindl. l. c. 107.

E. pseudobulbis monophyllis, folio lorato obtuso racemo 3—5-floro aequali, sepalis linearibus elongatis obtusis, petalis angustioribus acuminatis, labelli duplo brevioris lacinia media subulata lateralibus rotundatis nanis, columnae dente dorsali obtuso.

Wild in Mexico; Vera Cruz, on the parasitical Andromeda at the height of 4000 feet — Galeotti 5077 (adest in hb. Hooker). — „Flowers yellow." — Galeotti; very like those of Pleurothallis stenopetala, but larger.

135. EPIDENDRUM RUPESTRE Lindl. in Hook. Journ. III. 84. Huc Lindl. l. c. 108.:

E. caulibus filiformibus vaginis membranaceis vestitis diphyllis, foliis lanceolatis acutis pedunculo ancipiti aequalibus, racemo cernuo, bracteis membranaceis acuminatis pedicellis brevioribus, sepalis oblongis petalisque lineari-spathulatis obtusis, labelli trilobi laciniis lateralibus acutis margine postico serratis intermedia rotundata emarginata vel integra lineis tribus elevatis rugosis.

Wild in Peru; on bare rocks at the base of Tunguragua — Hall (v. s. sp. comm. cel. Hooker). — The whole plant about six inches high. Flowers yellow.

136. EPIDENDRUM (A. Folia ad n. 108) JAJENSE Rchb. fil. in Bonpl. II. 20.

Caule secundario ebulbi pauciarticulato, vaginis 3—4 membranaceis imbricantibus ostio triangulis vestito, summis cucullatis, folio solitario erecto ligulato acuto basi attenuato, pedunculo trifloro, bracteis lanceolatis apice brevisubulatis ovaria pedicellata dimidio aequantibus, sepalis lanceolatis acutis, tepalis linearibus acutis labelli adnati lamina libera cordata triloba, lobis lateralibus latere rotundatis antice triangulis, lobo medio lanceo, carinulis 3 in basi.

Blüthen klein. Blatt 2½ Zoll lang, in der Mitte ¼ Zoll breit. Der Stengel 1½ Zoll lang. Jaji. Wagener.

138. EPIDENDRUM BRACHYCHILUM Lindl. Orch. Linden n. 51. Huc Lindl. l. c. 109.:

E. foliis ligulatis obtusissimis racemo basi spathaceo brevioribus, sepalis petalisque ovalibus acutissimis, labello trilobo convexo disco villoso apice glabro petalis breviore.

sepalis petalisque lanceolatis, labello obovato piloso, callo magno apice transverse corrugato basi biconcavo pubescente, clinandrii trilobi lobis rugosis dorsali appendice membranacea 3-dentata anteposita.

Wild in Venezuela: on earth or trees at Jaji in Merida, at the height of 5—9000 feet; July — Linden 1468; Brazil? Minas Geräes — Weddell (v. s. sp. comm. cel. Linden). — „Pseudobulbs a foot or a foot and half long, compressed. Petals orange-yellow, spotted with red. Lip white, washed with purple". A plant in the way of E. variegatum, but with flowers four times as large. I suppose that a drawing, n. 1, in the Hb. Mus. Par., made in the Minas Geräes, by Mr. Weddell, belongs to this species.

Epidendrum tigrinum Lindl Rchb. fil. in Bonpl. II. 20. Caracas, Wagener. Das „labellum pilosum" existirt bloss in Büchern.

— Rchb. fil. in Bonpl. II. 281. Ocanna. 5000'. Juli. n. 38. Schlim.

148. EPIDENDRUM VARIEGATUM Hooker Bot. Mag. t. 3151. Bot. Reg. 1839. t. 11. Hue Lindl. l. c. 117:

E. pseudobulbis fusiformibus compressis diphyllis, foliis oblongis obtusis, racemo multifloro, sepalis petalisque subrotundo-obovatis coriaceis obtusis, labello subrotundo brevissimo acuto intus sub columna pubescente: callis duobus incurvis in appendicem hippocrepicam carnosam confluentibus, lobo columnae postico obtuso dente membranaceo subbifido anteposito.

(A) *verum*. Sepals and petals green spotted with purple. Lip white with a crimson horse-shoe mark.

(B) *coriaceum*. Flowers cream-coloured, with purple spots on the sepals and petals, and dirty purple streaks on the lip.

Epidendrum coriaceum Hook. Bot. Mag. t. 3595.

(C) *crassilabium*. Calli of the lip thicker and more downy. Leaves more remote at the base.

Epidendrum crassilabium Pöppig and Endl. Nov. Gen. II. p. t. 1. 102.

(D) *leopardinum*. Flowers yellow, marbled with dark red; lip white at the point. Leaves long, broad, like those of E. tigrinum.

Wild in tropical America. A. Brazil — Harrison, Loddiges; Rio Negro above Barcelles, common — Spruce 1948; New Grenada — Funk and Schlim 1435; B. Demerara — Parker; Jamaica — Purdie; C. Peru — Mathews 1886; trees and rocks in the primaeval forests near the farm of Pampayaco — Pöppig; D. New Grenada, in the province of Ocanna, at the height of 4950 feet — Schlim 1010 (v. v. c. et s. sp.) — A variable plant, readily known by its very short lip, on the base of which is placed a large concave downy callus, which presses against the column and gives the lip the appearance of being divided horizontally into two layers. On very strong specimens there are occasinally three or four leaves on a pseudobulb. The flowers are extremely fragrant. I am persuaded that the above synonyms represent different varieties of one and the same species, the leaves of which are sometimes strictly oblong, as in Spruce's specimens, sometimes strap-shaped, and as much as a foot long. Pöppig's figure is accompanied by details, which it would be difficult to find, and he overlooks the down on the lip, which is a striking feature of the species.

Hue: *Epidendrum* (Encyclium) *coriaceum* Focke Bot. Zeit. 1853. 228.

Foliis binis oblongo-lanceolatis acutis recurvis, pseudobulbo elongato (juniori ovali) ancipiti insidentibus, racemo axillari multifloro foliis breviore, floribus coriaceis, sepalis ovatis acuminatis, petalis dimidio angustioribus spathulatis sepalisque apice et margine recurvis, labello integro rotundato apiculato, ungue brevi columnae adnato, lateribus deflexis, disco calloso.

Radices albidae. Rhiz. repens, annulatum. Pseudobulbi compressi, ancipites; adultiores elongati, rugosi, annulato pedunculati; juniores ovales, vestiti, subsessiles,

Folia bina lanceolata, lineari-lanceolata linearia ve, acuta, recurva, coriacea, basi equitantia. Scapus racemosus terminalis, teres, validus, erectus, multiflorus, foliis brevior, viridis. Bracteae minutae, deltoideae. Perianthium coriaceum, patens. Sepala patentissima, ovata, acuminata, apice recurva, marginibus revolutis Petala dimidio angustiore spathulata, acuminata; sepala et petala viridescentia, atropurpureo-maculata, maculis oblongis hic illic confluentibus. Labellum integrum rotundatum, apiculatum, latioribus reflexis, ungui brevi cum basi columnae connatum, disco calloso in columnam incumbens, callo albo in medio excavato totam cavitatem columnae implente, album; violaceo striatum. Columna brevis, mutica, apicem versus dilatata, bialata, alis extus convexis, labello paulo brevior, alba. Anthera subglobosa, 4 locularis. Pollinia 4 ovato, caudiculis binis affixa. Ovarium triquetrum. Capsula oblongo obovata, trialata, breve pedunculata. — Para, flum. sup. Commewini. Maj. Jun. Sept.

Huc: *Epidendrum pachysepalum* Klotzsch in Otto et Dietrich Allg. Gardenztg. XXIII. 274.:

Caule repente ramoso; pseudobulbis erectis compressiusculis longiusculo-ventricosis deorsum attenuatis triphyllis; foliis elongatis brevissime acutis rigidis plus minus recurvatis, inferne subattenuato-conduplicatis, subtus leviter carinatis; racemo terminali erecto robusto decempollicari viridi; bracteis brevibus convexis crassis ovatis acutis viridibus, basi tumidis; germine oblongo flavicante, tricostato deorsum in pedicellum attenuato; perigonii foliolis spathulatis patentissimis crassis, extus pallide viridi-flavidis, intus flavis dense rubro-punctulatis, interioribus angustioribus; labello parvo suborbiculari albido carnoso, apice obtuso recurvo lilacino, infra apicem squama minutissima semiorbiculari instructo, marginibus lateralibus rotundatis subrevolutis; gynostemio recto obtuse trigono pallide flavido; anthera biloculari; polliniis 4 atro-fuscis.

Epidendrum variegatum Hook. Rchb. fil. in Bonpl. II. 20. Caracas. Wagener.

149. EPIDENDRUM PAMPLONENSE H. G. Reichenbach in Linnaea XXII. p. 837. Huc Lindl. l. c. 118:

E. racemo multifloro (14), bracteis lanceolatis acutis, sepalis oblongis cuneatis obtusis, petalis subaequalibus minoribus, labello minuto ovato cuneato antice nunc obsoletissime trilobo callo magno longitudinali foliaceo apice acuto lateribus implicato, partibus lateralibus hinc centrum ipsius calli tegentibus, clinandrii lobo dorsali obtuso lacinia subulata anteposita, lateralibus emarginatis.

Wild in New Grenada; Pamplona, at the height of 6000 feet; January — Funck and Schlim 1435 (Rchb.) — Leaves in pairs, long, acute, carinate. Nearly allied in lip leaves and column to E. tigrinum and variegatum. Flowers yellow and white, flecked with purple. — Rchb.

Epidendrum pamplonense Rchb. fil. Rchb. fil. in Bonpl. II. 281. Socorro: Lajitar. 4—9000'. Januar. n. 1190. Schlim.

150. EPIDENDRUM SPONDIADUM H. G. Reichenbach in Bot. Zeit. 1852. p. 731. Huc Lindl. l. c. 119:

E. spatha ancipiti crassa, pedunculo valido plurifloro, bracteis triangulis excavatis brevissimis, pedicellis in ovaria triptera sensim abeuntibus, sepalis oblongis acutis, petalis obovato-oblongis acuminatis, labello ovali antice subito acuto, callo depresso oblongo a basi discum versus in carinulam antrorsum excurrente, columna abbreviata crassa, clinandrii auriculis lateralibus obtusangulis nunc bilobis, media lineari apice tri- quadridentata.

Wild in costa Rica; on the Spondias — Warscewitz.

Wild in Venezuela; the thick forests of the slope of the Sierra Nevada, at the height of 7000 feet — Linden 648; New Grenada, in the province of Ocanna, at 4800 feet Schlim 1016: Funk and Schlim 1182 (v. s. sp. comm. cel. Linden). — Pseudobulbs as in E. fragrans. Petals yellow, spotted with brown. Lip bright yellow. Flowers very fragrant. Leaf nearly a foot long. Spathe acuminate, bracts obsolete.

Epidendrum brachychilum Lindl.: Rchb. fil. in Bonpl. II. 281. Pamplona: la Baja. Juli 9000'. n. 1187. Schlim.

— Rchb. fil. in Bonpl. III. 68. Ocanna. Wagener.

— Rchb. fil. in Bonpl. II. 20. Caracas 6000'. Mai. Wagener.

139. EPIDENDRUM ARMINII Rchb. fil. in Bonpl. III. 67.

Affine Epidendro brachychilo Lindl.: monophyllum habitu Epid. Moritzii Rchb. fil. et Ep. straminei Lindl. labelli lobis lateralibus rhombeis, superiori angulo obtuso, lobo medio lineari apice calloso, disco ecalloso velutino.

Planta gracilis. Pseudobulbus fusiformis tenuis monophyllus. Folium cuneato-ligulatum obtuse acutum, 4—5 pollices longum, medio duas tertias pollicis latum. Sepala triangulo lanceolata acuta extus brunnea. Tepala cuneato-ovata acuta. Labellum flaveolum, striis quibusdam longitudinalibus atropurpureis, pube velutina alba. — Epiphyt und auf Steinen. 5000'. Februar. Ocanna. Wagener.

140. EPIDENDRUM FALLAX Lindl. Orch. Linden n. 59. Huc Lindl. l. c. 110.:

E. foliis loratis obtusis emarginatisque inaequalibus basi remotis, racemo basi spathaceo duplo brevioribus, spatha papyracea, sepalis petalisque lanceolatis, labello semilibero aequaliter trilobo concavo medio tomentoso, laciniis lateralibus rotundatis, intermedia subcordata acuta.

(A) Petals reddish. Lip purple, edged with white.

Epidendrum Lindenii Lindl. in Ann. Nat. Hist. XII. 397.

(B) *flavescens*. Petals orange-yellow. Lip white, mixed with yellow.

Wild in Venezuela; on trees in the thick forests of the Sierra Nevada, at the height of 8—8000 feet — Linden, 624, 645 (v. s. sp. comm. cel. Linden). — Pseudobulbs like those of E. fragrans. Spathe membranous. Flowers sweet-scented. The first two varieties seem to differ in nothing but colour. They are near E. venosum, the middle lobe of whose lip is much larger than the side ones. — Rchb. fil. in Bonpl. II. 20. Barbacoas. März. 4000'. Wagener.

var. *flavescens* Rchb. fil. in Bonpl. II. 20. Merida. 10,000'. December. Herr Wagener hält diese Form für specifisch verschieden, sie soll viel längere Trugknollen haben und nur in dieser hohen Region anzutreffen sein.

142 EPIDENDRUM SCEPTRUM Lindl. Orch. Linden n. 50. Huc Lindl. l. c. 111.

E. foliis loratis basi remotis obtusis emarginatisque racemo basi spathaceo pluries brevioribus, spatha foliacea, sepalis lanceolatis, petalis obovatis unguiculatis acutis, labello subrotundo-hastato medio basi pulvinato pubescente, clinandrio obtuse trilobo.

Wild in Venezuela; on rotten trees near the Indian village of Jagi, at the height of 6500 feet — Linden 650; Sa. Martha, on trees near Pacho — Purdie; New Grenada, Ocanna — Schlim, 769 and 745 (v. s. sp.) — Pseudobulbs a foot long, compressed; raceme one to two feet long. Flowers very numerous, arranged in spikes. Petals golden-yellow, very brilliant, spotted with purple. Lip bright purple, white at the base. Purdie's Sa. Martha specimens, in Sir W. Hooker's herbarium entirely agree with Linden's. The plant varies much in the brilliancy of its colour.

Epidendrum sceptrum Lindl. Rchb. fil. in Bonpl. II. 281. Auf Steinen und auch epiphyt. Ocanna. 6000'. Mai. n. 764. Schlim. Diese treffliche, reich und dankbar blühende Art hat goldgelbe mit Purpur gefleckte Hüllblätter. Die Lippe ist gelbweiss mit Violett.

143 EPIDENDRUM REFRACTUM Lindl. in Ann. Nat. Hist. XII. Orch. Linden. n. 39. Huc Lindl. l. c. 112.

E. folio ovato-oblongo coriaceo obtuso, pedunculo elongato spathis plurimis falcatis obtusis distinctis vaginato, racemo brevi 4—5-floro cernuo, floribus carnosis, sepalis oblongis acutis, dorsali refracto, petalis ovalibus subconformibus, labello subrotundo cordato trilobo basi bicalloso linea elevata interjecta: lacinia intermedia abbreviata truncata.

Wild in Venezuela; the high regions of the Sierra Nevada in Merida, at the height of 10,000 to 11,000 feet — Linden 618 (v. s. sp.) — A remarkable plant, with very broad, short, oblong coriaceous leaves, six or seven herbaceous, distinct, falcate spathes on a peduncle about nine inches long. Sepals about three-quarters of an inch long. „Pseudobulbs six to eight inches long. Flowers blood-colour." Linden.

Epidendrum refractum Lindl. Rchb. fil. in Bonpl. II. 20. Merida. Dec. 12,000'. Wer bloss die Spitze des Blüthenstiels erhält, ohne die Pflanze zu kennen, wird sie getrost als neues Spathium bestimmen. Die überhängende Traube purpurschwarzer Blüthen ist sehr ausgezeichnet. Wagener.

144. EPIDENDRUM HARTWEGII Lindl. in Plant. Hartw. p. 150. Huc Lindl. l. c. 113.

E. foliis 2 basi remotis oblongis obtusis coriaceis apice obliquis spicae rigidae multiflorae basi spathaceae caulisque bulbosi teretis longitudine, floribus coriaceis, ovario triquetro clavato, sepalo supremo oblongo obtuso lateralibus acutissimis, petalis obovatis, labello subrotundo aequaliter trilobo basi callo pubescente concavo aucto, ungue et columna brevissimis.

Wild in Peru: on the Cordillera near Loxa — Hartweg (v. s. sp.) — Nearly allied to E. fallax, but the leaves are shorter and broader, the spike very short and stiff, the flowers much more coriaceous. Their colour is unknown.

145. EPIDENDRUM VOLUTUM Lindl. in Paxton's Flower Garden; gleanings n. 427. ic. 215. Huc Lindl. l. c. 114.

E. caule tereti membranaceo-vaginato apice 3-phyllo, foliis lineari-oblongis pergameneis inaequalibus, racemo sessili stricto flexuoso, bracteis magnis glumaceis distantibus pedunculis longioribus, sepalis petalisque linearibus margine revolutis aequalibus acutis, labello subrotundo-ovato subcordato decurvo leviter trilobo cuspidato, callis 2 ad basin plicisque tribus obsoletis.

Wild in Central America — Skinner (v. v. c.) — Stem merely terete, and not swollen into a pseudobulb. Flowers greenish white, and of no beauty. Easily known by the great alternate paleaceous bracts, planted on a somewhat zigzag rachis, and reaching nearly to the middle of the foot-stalk and ovary of each flower.

146. EPIDENDRUM PULCHELLUM Richard and Galeotti, Orch. Mex. n. 45. Huc Lindl. l. c. 115.

E. „nanum, pseudobulbis ovoideis diphyllis, foliis ovali-oblongis acutis, floribus purpureis, racemo simplici terminali 3—4-floro, labello adnato trilobo concavo lobis lateralibus latis obtusis, intermedio minori emarginato".

Wild in Mexico — Galeotti.

§ 6. *Osmophytum.* Lindley in Bot. Reg. 1839. Misc. 135. Hook. Journ. III. 81.

In the whole of this division the lip is absolutely undivided, without any apparent tendency to even rudimentary subdivision.

147. EPIDENDRUM TIGRINUM Lindl. Orch. Linden n. 52. Huc Lindl. l. c. 116.

E. foliis oblongis coriaceis racemo basi squamato duplo brevioribus,

April — Gardner 624. 5069 (v. v. c. et s. sp.) — Flowers pale, whole-coloured, yellowish green, with five small violet spots at the base of the lip. Not fragrant. A small twoleaved plant, four or five inches high.

159. EPIDENDRUM TRIPUNCTATUM. Huc Lindl. l. c. 126:

E. pseudobulbis ovalibus diphyllis, foliis anguste loratis recurvis scapo longioribus, racemo paucifloro, bracteis minutis, sepalis linearibus acuminatis, petalis angustioribus, labello lanceolato plano basi pubescente, callis 2 clavatis sulcisque 3 utrinque, columnae lobis anticis acutis.

Wild in Brazil — Loddiges (v. v. c.) — Much like E. calamarium. Flowers yellowish, with three deep purple spots in front of the calli, and two or three smaller on each side above the furrows of the lip.

160. EPIDENDRUM ATTENUATUM. Huc Lindl. l. c. 127:

E caule basi ramoso in pseudobulbos tenues angustos monophyllos diviso, folio lineari-lanceolato racemo tenui spicaeformi duplo breviore, bracteis subulatis, sepalis linearibus membranaceis acutis, dorsali reflexo, petalis filiformibus, labello ovato cordato basi bisquamato tuberculo interjecto, ovario lagenaeformi.

Wild in Venezuela; Truxillo, at the Aguas de Obispo, at the height of 9000 feet; August — Funck and Schlim 734 (v. s. sp. comm. cel. Linden). — The habit is that of E. transparens Flowers small, membranous, with reddish petals and a yellow lip, on which are five strongly marked forked dark veins.

161. EPIDENDRUM COCHLEATUM Linn. Jacq. Ic. Rar. III. t. 605. Bot. Mag. t. 572. LO. p. 97. Huc Lindl. l. c. 128.

E. pseudobulbis ovalibus compressis diphyllis, foliis oblongis acutis subundulatis, sepalis petalisque paulo angustioribus lineari-lanceolatis reflexis, labello postico cordato cochleato subrotundo basi bicalloso, columna nana, clinandrii lobo dorsali obtuso dente lineari bifido anteposito.

(β) *pallidum*. Stains on the lip very faint.

Anacheilium cochleatum Hoffmgg. in Linnaea XVI. 229.

Wild in the West Indies, where it is common; in Mexico, near Zacuapan etc. — Galeotti 5107 (v. v. c. et s. sp.) — Leaves broad, deep green, in pairs upon an oval furrowed pseudobulb. Sepals and petals green. Lip green, bordered with purple and deeply stained with the same colour below the middle.

Epidendrum cochleatum L. Rchb. fil. in Bonpl. II. 20. Caracas. Wagener.

162. EPIDENDRUM LANCIFOLIUM Pavon. LO. p. 98. Bot. Reg. 1842. t. 50. Huc Lindl. l. c. 129.

E. pseudobulbis ovalibus diphyllis teretibus, foliis oblongo-lanceolatis acutiusculis, racemo brevi, sepalis petalisque lanceolatis acuminatis reflexis, labello cordato oblato-ovato cochleato basi tricostato.

Wild in Mexico — Hartweg (v. v. c.) — Like E. cochleatum; but sepals and petals shorter and broader, and lip regularly cochleate, without a tendency to lobing at the edge. Flowers pale green; lip marked with deep crimson radiating streaks.

163. EPIDENDRUM RADIATUM Lindl. in Bot. Reg. misc. 1841. n. 123; 1844. t. 45. Huc Lindl. l. c. 130:

E. pseudobulbis ovatis compressis utrinque costatis triphyllis, foliis angustis elongatis acutis, racemo denso paucifloro, ovariis trialatis, sepalis lanceolatis petalisque ovalibus patentissimis, labello cochleato retuso crenato crispo basi bicalloso pubescente, clinandrii laciniis lateralibus erectis carnosis, intermedia truncata apice serrata.

Epidendrum marginatum Link, Klotzsch and Otto Ic. Pl. t. 36.

? *Epidendrum bracteolatum* Presl. Rel. Haenk. 100. LO. 5.

Wild in Mexico; rocks near the Hacienda de la Laguna; August — Schiede 11;

Oaxaca — Galeotti 5020; Vera Cruz — Id. 5161; Guatemala — Skinner (v. v. c. et s. sp.) — Allied to E. cochleatum; it has the same habit, but the pseudobulbs are strongly ribbed at the side, and the lip has the margin crisp and crenated. The flowers are pale pea-green, with the exception of the lip, wich is striated with bright deeper purple rays.

164. EPIDENDRUM CHONDYLOBOLBON Rich. and Galeotti Orch. Mex. n. 43. Huc Lindl. l. c. 131:

E. „pseudobulbis oblongis compressis basi articulatis 3—4-phyllis, foliis lanceolato-linearibus obtusis, flor. luteis violaceo-lineatis, labello breviter unguiculato cordato apice longe acuminato acutissimo".

Wild in Mexico — Galeotti.

165. EPIDENDRUM MARMORATUM Rich. and Galeotti Orch. Mex. n. 44. Huc Lindl. l. c. 132:

E. „pseudobulbis oblongo-fusiformibus articulatis, foliis ellipticis oblongis, scapo terminali dependente, flor. violaceis, labello adnato convexo orbiculari emarginato costato".

Wild in Mexico — Galeotti.

166. EPIDENDRUM AVICULA Lindl. in Hooker's Journal III. 85. Huc Lindl. l. c. 134.

E. ramulis pseudobulbosis diphyllis, foliis ovatis planis margine laevibus panicula tomentosa multo brevioribus, sepalis lanceolatis acutis tomentosis, petalis linearibus, labello acuto subrhombeo basi bicalloso.

Wild in Brazil; Organ mountains, forming dense tufts on the stems and branches of trees; April — Gardner 625 (v. s. sp.) — Leaves about an inch long. Panicle between three and four inches. Flowers small, when seen from the back not unlike a little bird in full flight.

(§ 8. Sectio Lanii inter Epidendra foliosa et pseudobulbosa divisa. Have pia anima! Erant E. microphyllum Lindl. n. 133. et E. Avicula Lindl. n. 134.)

§ 8. *Spathium.* Lindley in Hooker's Journal of Botany, III. 81. Bot. Reg. 1844. Misc. 82.

This division is distinguished by its stem being slender, leafy, and erect, its flowers placed on a long peduncle, which proceeds from a spathe consisting of one or more equitant bracts, and by its labellum being wholly attached to the corolla. It differs from Aulizeum in its stem being covered with leaves, and not pseudobulbous with two or three leaves at the end only. It is very near Amphiglottium, from which it is distinguished by the branches not being excessively lengthened and covered with close pressed scales below the flowers. In their stead there is usually a long sheathing spathe, like that of Cattleya, out of which the inflorescence proceeds: occasionally there are several of such spathes, as in the second section of the following enumeration, which is only known from Amphiglottium by the spathes being large and herbaceous instead of dry and membranous.

a. Spatha subsimplex. Flores racemosi.

* Labellum indivisum.

167. EPIDENDRUM GRANDIFLORUM Lindl. in Hook. Journ. III. 86. Huc Lindl. l. c. 135.:

E. foliis distichis ensiformibus obtusis, racemo denso terminali basi flexuoso e spatha duplici orto, sepalo dorsali ovali lateralibus duplo latioribus dimidiatis, petalis linearibus, labello subrotundo cordato emarginato margine postico crispo venis baseos 2 elevatis.

— Rchb. fil. in v. Mohl et v. Schlechtendal Bot. Zeitg. l. c.:

Spatha ancipiti crassa, pedunculo valido plurifloro, bracteis triangulis excavatis brevissimis, pedicellis in ovaria triptera sensim abeuntibus, perigonii phyllis tribus oblongis acutis, internis obovato-oblongis acute acuminatis, labello basi adnato ovali antice subito acuto, callo depresso oblongo a basi discum versus in carinulam antrorsum excurrente; gynostemio abbreviato crasso, androclinio triauri, auriculis lateralibus obtusangulis, nunc bilobis, auricula media lineari, apice tri — quadridentata.

Costa Rica: auf Spondias. v. Warscewicz.

151. EPIDENDRUM WIDGRENII. Huc Lindl. l. c. 120.

E. pseudobulbis teretibus diphyllis, foliis oblongis scapo subaequalibus, spatha papyracea pedunculi angulati longitudine, racemo 6—8-floro stricto, sepalis lanceolatis acuminatis, petalis ovalibus, labello subrotundo cochleato acuminato basi bicalloso secus axin costato.

Wild in Brazil; Minas Geräes — Widgren 775 (v. s. sp.) — Resembles E. fragrans, from which it is immediately known by the presence of a strong rib which runs along the axis of the lip.

152. EPIDENDRUM COLLARE Lindl. in Bot. Reg. 1843. misc. 85. Huc Lindl. l. c. 121.:

E. caulibus fusiformibus elongatis apice triphyllis, foliis coriaceis canaliculatis patentibus, racemo laxo paucifloro, cuniculo ovarii elongato extus manifesto, sepalis petalisque conformibus petaloideis undulatis lanceolatis, labello ovato obtuso undulato apice recurvo basi trilamellato, lamellis lateralibus basi bilobis, clinandrii margine elevato denticulato.

Wild in Guatemala — Hartweg (v. v. c.) — Stems eighteen inches long, strong, and deeply furrowed. Flowers white, changing to yellow and brown as they go off Anther-bed surrounded by an elevated edge, standing up like a collar. The cuniculus of the ovary as prominent and conspicuous as in a Pelargonium.

Obs. Me judice ad Aulizea pertinet. Rchb. fil.

153. EPIDENDRUM FRAGRANS Swartz Fl. Ind. Occ. III. 1847. Bot. Mag. t. 1669. Bot. Cab. t. 1089. Huc Lindl. l. c. 122:

E. pseudobulbo monophyllo angusto fusiformi, foliis lanceolatis apice recurvis, scapo folio breviore, sepalis lineari-lanceolatis petalisque ovato-lanceolatis acuminatis patentibus, labello subrotundo cuspidato lineato integerrimo, columnae lobo dorsali obtuso dente bifido anteposito.

Epidendrum aemulum Lindl. in Bot. Reg. t. 1898.

Epidendrum lineatum R. A. Salisbury stirp. 10.

(B) *megalanthum*. Flowers very large, with vivid stripes of rich crimson on the lip.

Wild in the Tropics of America; Dominica — Imray; Jamaica — Swartz; French Guiana Leprieur 123; Surinam — Hostmann 205; Focke 127; Demerara — Schomburgk 423; Guayaquil — Jamieson; Para — Loddiges. B. Guatemala — Skinner (v. v. c. et s. sp.) — Flowers extremely fragrant, pale green or cream-colour, with crimson streaks on the lip. This plant, the great range of which is indicated by the above localities, is subject to much diversity of appearance, according to its age or the place in which it grows. My E. aemulum is not, I believe, even a variety, but merely a diminutive state. The variety B is remarkable for its gigantic dimensions, which it retains in cultivation; the flowers are full four inches in diameter, and its pseudobulbs and leaves, taken together, are sometimes eigthteen inches long.

Epidendrum fragrans Sw. Rchb. fil. in Bonpl. II. 20. 4000'. Mai. Barcelona. Wagener.

Obs. Me judice vulgaris planta E. aemulum Lindl. dicenda. E. fragrans Swartzii mihi bene differt. Qua de re alio loco.

154. EPIDENDRUM LAMBDA Lind., Rchb. fil. Rchb. fil. in Bonpl. II. 281.

Affine Epidendro fragranti Sw. labello cordato triangulo acuto, lineis in basi tribus velutinis, columnae dente postico simplici.

Pseudobulbus apice angustus. Folium lanceolatum curvatum acutum bene coriaceum. Spatha anceps acuta. Racemus pauciflorus. Sepala lanceo acuta. Tepala oblongo-lanceolata acuta latiora. Labelli lineae baseos exteriores subplicatae. Perigonium flaveolum, lineae violaceae radiantes in labello, multae apice furcatae literam graecam Lambda simulant. Flores illis Epidendri fragrantis mediani aequales. — Ocanna. Wälder. 6—7000'. Juni. n. 744. Schlim.

155. EPIDENDRUM (O. Folia ad n. 130.) CHACAOENSE Rchb. fil. Bonpl. II. 20.

Pseudobulbis pyriformibus diphyllis, foliis oblongo-ligulatis acutis basi attenuatis, pedunculo crasso 2—3 pollicari, bivaginato quinquefloro, bracteis vaginaeformibus acutis, sepalis oblongo lanceolatis acutis, tepalis cuneato obovatis acutis, labello ovato acuto cochleato, basi gynostemii adnato, callo sericeo bilobo a basi in discum, gynostemio abbreviato crasso, fovea stigmatica semilunata, androclinio trilobo, lobis lateralibus falcatis erectis, medio postico minuto cum appendiculo lineari.

Blüthen so gross, wie die des E. radiatum, Hülle grün, Lippe weiss mit Purpur-Längenstreifen. Caracas. 3000'. März. Wagener.

156. EPIDENDRUM GLUMACEUM Lindl. in Bot. Reg. 1840. t. 6. Huc Lindl. l. c. 123:

E. pseudobulbis ovatis apice angustatis diphyllis, foliis anguste oblongis patentibus, racemo terminali cylindraceo e spathis glumaceis erumpente, sepalis linearibus petalisque lineari-lanceolatis acuminatissimis, labello obovato acuminato convexo integerrimo basi calloso.

Wild in Brazil; on the branches of Vellozia candida, on the summit of the Pedro Bonito Mountain, common — Gardner 243; Equador — Sinclair (v. v. c. et s. sp. in hb. Hooker). — This has the habit and sweet odour of E. fragrans, from which it differs in the colour of its flowers, which are white, tinged with pink, and striped with rose, in the long tapering figure of the flower-buds, caused by the peculiar form of the sepals and petals, and in the shape of the lip, which is convex, not concave, obovate, and acuminate.

157. EPIDENDRUM INVERSUM Lindl. in Bot. Reg. 1839. misc. 135. Huc Lindl. l. c. 124.

E. pseudobulbis diphyllis elongatis compressis, foliis oblongo-loratis, obtusis, spica terminali sub-6-flora basi spathacea, bracteis brevibus ovatis acuminatis, ovario triquetro, sepalis petalisque patentibus lineari-lanceolatis convexis subaequalibus, labello ovato acuminato basi laevi medio sulcato callis 3 obsoletis, columna obtuse 3-dentata, antherae cardinis appendice oblonga denticulata.

Wild in Brazil; on the Crescentia — Martius; in the Mines Gerães — Widgren 776 (v. v. c. et s. sp.) — Flowers straw-coloured, with a few purple streaks on the column and at the base of the lip; a heavy not very pleasant smell, something like that of Glechoma, is peculiar to it. It differs from E. glumaceum in the colour and small size of its flowers, and I believe in the calli of the lip, but the specimens of that plant at my disposal do not enable me to describe them accurately. The species are, however, no doubt distinct. — Cf. G. Chronicle 1852. 440.

158. EPIDENDRUM CALAMARIUM Lindl. in Bot. Reg. 1838. misc. 163. Huc Lindl. l. c. 125.

E. pseudobulbis teretibus ovalibus diphyllis, foliis linearibus planis abrupte acutis, racemo simplici erecto, bracteis minutis acuminatis, sepalis patentissimis linearibus acutis apice recurvis, petalis angustioribus subspathulatis, labello postico subrotundo acuto convexo basi pubescente, callo duplici lato apice confluente.

Wild in Brazil; Organ Mountains, on the stems and branches of trees in large clusters;

Wild in Peru — Matthews (v. s. sp. in hb. Hooker). — Flowers coriaceous, about twice as large as in E. variegatum.

168. EPIDENDRUM MANCUM Lindl. in Bot. Reg. 1844. Misc. 28. Huc Lindl. l. c. 136.:

E. foliis 3—4 oblongis obtusis carnosis, oblique emarginatis, supremo spathae longitudine, racemo stricto multifloro foliis multo longiore, floribus carnosis, sepalis subrotundo-oblongis obtusissimis, petalis spatulatis obtusissimis apice concavis, labello parvo postico carnoso concavo indiviso callo magno margine membranaceo in medio.

Wild in Peru; on the Cordillera, near Loxa, flowering in July — Hartweg; in New Grenada, in the province of Pamplona, at the height of 9000 feet — Schlim 135 (v. s. sp.). — Flowers rather small, orange and yellow — Hartweg; yellow spotted with red — Schlim.

169. EPIDENDRUM VENTRICOSUM Lindl. in Hook. Journ. III. 86. Huc Lindl. l. c. 137.:

E. foliis lineari-lanceolatis acutis, racemis angustis multifloris e spatha lineari ortis, floribus membranaceis, sepalis subaequalibus oblongis acutis, petalis filiformibus, columna ventricosa, labello ovato cordato acutissimo basi bicalloso.

Wild in Peru — Mathews (v. s. sp. in hb. Hooker). — A slender plant, with the stem about six inches up to the commencement of the spathe. Racemes from four to five inches long, including the spathe which covers the whole peduncle. Flowers purple, small, membranous.

170. EPIDENDRUM SCHLIMII H. G. Reichenbach in Linnaea XXII. p. 838. Huc Lindl. l. c. 201.:

E. pedunculo erecto subflexuoso basi spathaceo, spatha lanceolata acuta parva internodio ad florem breviore, bracteis lanceolatis acutis, floribus minimis paucis erectis, ovariis valde cuniculatis, sepalis ovatis acutis supremo cuneato, petalis linearibus apice dilatatis acutis, labello transverso oblongo nunc emarginato basi subcordato.

Wild in Venezuela: Merida, at the height of 6500 feet; September 1846 — Funk and Schlim 1049 (Rchb.). — Stem erect. Leaves half amplexicaul. Flowers pale red. Mr. Reichenbach observes that the spathe is quite small, and suggests that it may be not a Spathium, but an Amphiglottium.

Huc. *Epidendrum tenellum* Lindl. l. c. sub 138.:

E. foliis paucis linearibus, pedunculo flexuoso, bractea lineari carinata tenui ad utrumque articulum, floribus 3—4 membranaceis, sepalis oblongis carinatis apiculatis, petalis filiformibus, labello subrotundo rotundato repando basi bicalloso.

Wild in New Grenada — Funk and Schlim 1049 (v. s. sp. comm. cel. Linden). — The smallest species I know, not more than four inches high. The thin delicate bracts shorter than the internodes.

Epidendrum Schlimii Rch. fil. — Rchb. fil. in Bonpl. II. 20. Cf. Linnaea sub Spathio Lindl. Folia Orchidacea 201 sub Amphiglottio cit. Funk, Schlim 1049. — Epidendrum tenellum Lindl. Folia Orchidacea 138, cit. Funk et Schlim 1049!!! (Hierüber wird aus Vorsorge unter 234 ein zweites E. Schlimii aufgestellt, welches E. socorrense heissen mag). Jaji an stehendem Wasser. Blüthe weiss mit rosa. 6000'. Wagener.

171. EPIDENDRUM ADENOGLOSSUM Lindl. in Hook. Journ. III. 86. Huc Lindl. l. c. 139.:

E. foliis carnosis lineari-oblongis obtusis, racemo elongato simplici terminali e spatha ancipiti pedunculo breviore orto, sepalis ovatis reticulatis, petalis linearibus 3-veniis acutis, labello lineari basi callis 2 lamelliformibus minore interjecto instructo.

Wild in Peru: Pangoa — Mathews (v. s. sp. in hb. Hooker). — Flowers small, in a thin flexuose spike.

172. EPIDENDRUM (S. Folia ad 185) HETERODOXUM Rchb. fil. in Bonpl. II. 20.

„Caule elatiori, foliis ligulatis" spatha solitaria majuscula subscariosa, pedunculo flexuoso, bracteis squamosis triangulis brevissimis, ovario cum pedicello pollicari, sepalo summo lineariligulato acuto, basi valde attenuato, sepalis lateralibus ligulatis acutis latere inferiore curvilineis, cum tepalis linea m altius insertis ac sepalum summum, tepalis linearibus acutis, labelli lamina libera triangula hastata obtusa margine hinc lobulato crispulo denticulata; carinis elevatis duabus in basi apice abruptis in lineas elevatas transeuntibus.

Der Blüthenstiel trägt einen kleinen Nebenzweig. Caracas. Wagener.

Epidendrum heterodoxum Rchb. fil. Bonpl. III. 220. Zur Diagnose hinzuzufügen: caule obtuse ancipiti, foliis lanceis acutis. Der Stengel von der Dicke eines Gänsekiels. Die Blätter 5—6 Zoll lang, einen Zoll breit, fein zugespitzt, unterseits purpurfleckig oder ganz purpurn. Blüthen grün, wie die des Epidendrum nutans. Die Scheide scharf zweischneidig, sehr spitz. Der Blüthenstand gablig, jeder Zweig traubig, seitwärts übergeneigt. Sehr auffallend ist, wie die seitlichen Sepalen der Lippe am Grunde angewachsen sind. Aus Venezuela von Herrn Handelsgärtner Geitner auf den Erdbränden bei Planitz eingeführt.

** Labellum trilobum.

173. EPIDENDRUM BRACHYGLOSSUM Lindl. in Bot. Reg. 1844. Misc. 82. n. 6. Huc Lindl. l. c. 140.:

E. foliis lineari-oblongis apice rotundatis obliquis, racemo elongato simplici terminali nutante e spatha ancipiti pedunculo breviore orto, floribus carnosis, sepalis obovatis concavis, petalis linearibus 3-veniis acutis, labello brevi trilobo laciniis lateralibus nanis intermedia ovata callis duobus lamellaeformibus tuberculoque interjecto.

(B) *microtum*. Leaves longer and broader. Spathe more distinctly carinate. Lip linear, with a pair of minute auricles.

Wild in Peru; on the western face of the Andes, near Nanegal — Hartweg; — B, New Grenada in the province of Ocanna, at an elevation of 5800 feet — Schlim 1029 (v. s. sp.; B comm. cel. Linden). — A slender creeping rooted plant, with small flowers, and the appearence of E. adenoglossum, but the leaves are narrower and the lip has a different form. The supposed variety B may be a distinct species; but it is extremely like the original, and I dare not place too much reliance upon the form of the lip, which seems as if it might be that of adenoglossum, emaciated.

*** Labellum tripartitum.

174. EPIDENDRUM SARCODES. Huc Lindl. l. c. 141.

E. caulibus strictis brevibus carnosis, foliis oblongis obtusis carnosis, spathis 1—2 carinatis herbaceis, racemi cylindracei erecti pedunculo spathis longiore, bracteis minutis membranaceis, floribus coriaceis, sepalis oblongis crassis obtusis, petalis membranaceis obtusis apice dilatatis, labelli brevis carnosissimi lobis lateralibus rotundatis intermedio oblongo apiculato, callis 2 maximis lineaque elevata interjecta.

Wild in New Grenada; near Papaquere — Purdie (v. sp. in hb. Hooker). — General appearance that of E. mancum and cylindraceum. The excessive thickness of the lip is peculiar.

175. EPIDENDRUM ACUTISSIMUM. Huc Lindl. l. c. 142.:

E. caulibus elongatis, foliis angustis oblongis obtusis, racemi pedunculo spatha duplo longiore, bracteis setaceo-acuminatis ovario vix aequalibus, floribus carnosis, sepalis ovatis acutissime carinatis, petalis filiformibus brevioribus, labelli carnosi lobo medio brevi tereti carnoso,

lateralibus cordatis repandis margine membranaceis, callis 3 subaequalibus in lamellas deorsum desinentibus.

Wild in New Grenada; Mariquita — Triana 134 (v. s. sp. comm. cl. Linden). — Much like E. sarcodes, but with an entirely different flower, and larger thinner leaves.

177. EPIDENDRUM CYLINDRACEUM Lindl. in Bot. Reg. 1844 Misc. 82. Huc Lindl. l. c. 143.:

E. foliis ovato-oblongis, pedunculo spathis 2—3 equitantibus elongatis herbaceis vestito, racemo erecto elongato cylindraceo, sepalis obovatis acutis dorso scabris, petalis linearibus, labelli 3-partiti basi tricallosi laciniis lateralibus angustis antrorsum falcatis postice serrulatis, intermedia lineari basi latiore apice in lobos 2 subrotundos serrulatos divisa.

Wild in Peru; in the woods of Pitayo, in the province of Popayan, at the height of 10,500 feet — Hartweg; near Pasto — Jamieson (v. s. sp.). — Flowers small, in a very dense cylindrical raceme, about six inches long; whitish according to Jamieson in herb. Hooker.

Epidendrum cylindraceum Lindl. Rchb. fil. in Bonpl. II. 281. Blüthen gelb. Lippe weiss mit karminrothen Flecken. Ocanna. Paramos. 8—10,000′. Juli. n. 783. Schlim.

— b. *stenoglossum* Rchb. fil. in Bonpl. III. 68.

Labelli laciniis angustissimis.

Ocanna. Wagener.

178. EPIDENDRUM SARCÓCHILUM Lind., Rchb. fil. in Bonpl. II. 281.

Affine Epidendro cylindraceo Lindl., sarcodi Lindl. tepalis cuneatis acutis, labello cucullato brevissime libero, lobulis lateralibus erectis bilobulis seu integris gynostemio appressis, lobulo medio ligulato nunc obtuse trilobulo, callo triangulo quinquelobo in disco in duas lineas carinatas excurrente.

Planta pedalis. Vaginae arpophyllaceae. Folia oblongoligulata apice obtuse bilobula superne vernixia. Spathae 2 angustae obtusae. Pedunculus erectus cylindraceus ramosus. Bracteae triangulae apice subulatae ovariis pedicellatis quater-quinquies breviores. Sepala carnosa. Sepalum summum cuneato ovatum. Sepala lateralia oblique ovalia apiculata. — Blüthen braun und gelb. — Ocanna: Paramos. 9000′. Mai. n. 1155. Schlim.

179. EPIDENDRUM SINUOSUM. Huc Lindl. l. c. 144:

E. caule longo flexuoso compresso, foliis lanceolatis acutis, racemo brevi nutante, pedunculo spatha falcata breviore, bracteis minutis setaceis, sepalis coriaceis dorsali lanceolato lateralibus valde obliquis, petalis lineari-spathulatis reflexis, labelli lobis lateralibus cordatis acutis basi callosis postice denticulatis intermedio oblongo acuto, callis 2 in lineas sinuosas excurrentibus lineaque recta elevata interjecta.

Wild in Colombia; in subalpine forests at the mouth of the Paramo del Tambor, at the height of 6000 feet; Nov. — . . . ? 1181 (v. s. sp.) — I am unacquainted with the name of the collector by whom this was found, and can only give his number. The leaves are seven or eight inches long. „Flowers yellowish".

180. EPIDENDRUM BREVIVENIUM. Huc Lindl. l. c. 145:

E. caule ramoso, foliis oblongis obtusis, spatha ancipiti obtusa, pedunculo ancipiti breviore, racemo laxo erecto, bracteis setaceis ovarii longitudine, sepalo dorsali oblongo lateralibusque dimidiatis 3-veniis, petalis linearibus obtusis 1-veniis, venis omnium cis apicem desinentibus, labelli lobis lateralibus auriculatis antice digitatis intermedio lineari in lobulos duos divergentes dilatatòs expanso, callis 3 minutis, clinandrio cucullato emarginato.

Wild in Peru; Pichincha at 10,000 feet of elevation — Jamieson, 817 (v. s. sp. in hb. Hooker). — Flowers the size of E. corymbosum, apparently pale green. The short veins which never reach the point of the parts to which they belong are very peculiar.

181. EPIDENDRUM TRINITATIS Lindl. in Bot. Reg. 1844. misc. 82. Huc Lindl. l. c. 146:

E. caulibus foliosis ancipitibus, foliis elongatis lineari-lanceolatis glaucescentibus obtusis oblique emarginatis, racemo terminali nutante pedunculato basi spatha herbacea equitanti, sepalis lineari-lanceolatis, petalis piliformibus, labelli lobis lateralibus acutis concavis denticulatis intermedio lineari-lanceolato acuminato basi 3-calloso.

Wild in Trinidad — Garden report; Santa Martha, Molina Rio Hacho — Purdie (v. v. c. et s sp.) — Flowers small, in a long raceme, pale greenish yellow, with a deep apricot-yellow lip. It appears from Purdie's specimens in Sir W. Hooker's herbarium to form particularly long thick roots.

182. EPIDENDRUM CARNEUM Lindl. Orch. Linden n. 49. Huc Lindl. l. c. 147:

E. foliis oblongis obtusis, spatha solitaria recta carinata pedunculo aequali v. breviore, racemo nutante, bracteis membranaceis setaceis, sepalis lateralibus lanceolatis acuminatis, petalis filiformibus, labelli lobis lateralibus subrotundo-cuneatis planis intermedio carnoso lineari acuminato basi trilamellato.

Wild in Venezuela; terrestrial in the forests of Jaji, in the province of Merida, at the height of 5000 feet; August — Linden 675 (v. s. sp.) — Flowers smaller than in E. bivalve, yellow, with a flesh-coloured lip, arranged in a nodding raceme from three to four inches long.

— Rchb. fil. in Bonpl. III. 68.:

Affine Epidendro parvilabio labelli partitionibus lateralibus semiovatis antice acutiusculis basi semicordatis, partitione medio acuminata, carinis duabus semiovatis basi contiguis in disco, carinula antice interjecta in partitione media evadente, partitionibus lateralibus juxta carinas medianas incrassatis.

Caulis sursum pseudobulbosus more Epidendri clavati. Vaginae scariosae, folia gemina lanceolata acuta. Spatha membranacea acuta. Pedunculus racemosus pluriflorus patulus seu cernuus. Bracteae subulatae ovariis pedicellatis quater aut quinquies breviores. Sepela carnosula lanceolata acuminata. Tepala lineari-subulata. Gynostemium utrinque apice sinuosum. Ocanna. 5000'. Wagener.

183. ? EPIDENDRON FLAVO-VIRENS Rgl. (*E. densifloro affine* H. Petrop.) Ind. sem. hort. Petrop. 1855 et Lem. XXVII. p. 371. — Spathium, a. Spatha simplex. Flores racemosi. Labellum tripartitum. (Lindley fol. orchid.).

Caule simplici subtereti, foliis ligulato-oblongis, apicem versus attenuato-acutis; pedunculo spathis 2 acutis equitantibus paullo longiore; bracteis membranaceis, ovario quadruplo brevioribus, lanceolatis acutis; racemo cernuo (6-floro), foliis supremis breviore; sepalis oblongo-lanceolatis, basin versus cuneatis, apice acutis, 4-veniis, lateralibus valde obliquis; petalis filiformi-spathulatis, sepalis paullo minoribus; labelli lobis lateralitus falcato-oblongis truncatis, intermedio abbreviato in lobulos duos divergentes subtriangulares obtusos expanso; callis duobus basilaribus auriculaeformibus, costisque tribus elevatis labelli axin occupantibus.

Caulis 2—3-pedalis, 4 lineas crassus, foliisque laete viridibus. Folia disticha, ad 9 pollices longa, $1^1/_4$ pollices lata. Racemus foliis brevior. Spatha inferior foliacea, anceps, ligulato-oblonga, subfalcata, acuta, pedunculum subaequans, spatha superior membranacea. Bracteae parvae, vix sesquilineam longae. Flores flavo-virentes, sepalis petalisque incurvo-patentibus, sepalis $^2/_3$ pollices longis, lineas 2

latis. Labellum columnae adnatum, sepala superans. Floret Decembri. Patria ignota. E. brevivenio Lindl. affine.

184. EPIDENDRUM BIVALVE. Huc Lindl. l. t. 148:

E. foliis oblongo-lanceolatis, spatha solitaria falcata carinata pedunculo aequali, sepalis lateralibus lanceolatis acuminatissimis, petalis linearibus deflexis, labelli lobis lateralibus semicuneatis planis, intermedio carnoso tereti, lamellis baseos latissimis lobis lateralibus subaequalibus tuberculo interjecto.

Wild in Venezuela; on trees in the forests of Pamplona, at the height of 9000 feet — Linden 1266 (v. s. sp.) — Flowers yellow, larger than in E. carneum. I believe this to be really distinct from that species, with which I confounded it in the Orch. Lind. The great bivalve calli and terete middle lobe of the lip are peculiar.

185. EPIDENDRUM FRIDERICI GUILIELMI Wzw. MSS. 1853. Rchb. fil. Bonpl. II. 110.

Juxta (cui non affine) E. sinuosum, foliis oblongis, pedunculo maximo, labelli laciniis lateralibus rotundatis, basi semicordatis, lacinia media ligulata acuta, callis 2 rhombeis in basi.

Frutex robustus, exaltatus, caules validi, foliosi, folia cuneato obovata obtuse acutata, spatha solitaria, late anceps, apice oblique fissa; pedunculus spatham usque valde floridus, vulgo rectus, nunc cernuus, bracteae triangulae angustae minutae ovarium pedicellatum gynostemio ter longius, sepalum summum ligulatum acutum, sepala lateralia subaequalia margine inferiori obliqua, tepala lato-linearia acuminata, labelli laciniae posticae rotundatae, dimidio inferiori postice producto semicordatae lacinia antica producta ligulata acuminata, calli 2 rhombei pagina inferiori longitudinaliter unicarinata in basi, carina interposita a basi in discum. — Blüthen purpurn, viermal kleiner, als die des gigantischen E. longiflorum H. B. Kth. Peru. Warscewicz.

186. EPIDENDRUM CYLINDROSTACHYS Rchb. fil. et Warsc. in Bonpl. II. 110.

Pone E. bivalve pedunculo floribundo spatham longe superante, tepalis apice dilatatis, labelli lobis lateralibus semilunatis, lobo medio carnoso ancipiti.

Caulis flexuosus, folia lineariligulata (7 pollices longa, 11 lata) obtusa apiculata inferne carinata, spatha anceps angusta apice oblique rotundata (— 6 - pollicaris), nunc supraddita altera, pedunculus nudus erectus, ceterum incurvato cernuus, valde floridus, bracteae lineariacutae brevissimae, flores parvi, chartacei, sepalum summum cuneatoligulatum acutum, sepala lateralia longitudinaliter semielliptica subfalcata, reversa, tepala a basi angustissime lineari dilatata obtusa, labelli lobi laterales semilunati, post gynostemii androclinium inserti (ex sicco oblique centrum versus, ascendentia), lobus medius carnosus, anceps, apposito utrinque callo parvo sub androclinio, androclinium marginatum, crenulatum. — Blüthen fast so gross, wie die des Epidendrum cylindraceum Lindl. Neu - Granada. Warscewicz.

187. EPIDENDRUM CORNUTUM Lindl. in Hooker's Journ. III. 86. Huc Lindl. l. c. 149

E. foliis gramineis lineari-lanceolatis acutissimis, racemo elongato cylindraceo cernuo, sepalis linearibus acuminatis striatis, petalis filiformibus, labelli trilobi laciniis lateralibus nanis rotundatis intermedia tereti cornuta basi 3-callosa.

Wild in Peru — Matthews 1895; New Granada, Boca del Monte, between Bogota and the village of Tena — Hartweg 1420 (v. s. sp.) — The Peruvian plant is more slender and smaller in all its dimensions than that from New Grenada, but I think not otherwise different. The two spathaceous bracts are acuminata, as long as the peduncle. Flowers white, very fragrant.

Huc: *Epidendrum cornutum* Lindl. Rchb. fil. in Bonpl. II. 110:

Aff. E. alpicolo, labelli lobis lateralibus radianticarinulatis, callo inter lobos laterales antice truncato libero, latere utroque carina jugosa definito, linea carinata per lobum medium lanceum.

Caulis calamum cygneum crassus verosimiliter anceps. Folia angusta lanceolata acuminata, 5 — 6 pollices longa, medio duas tertias lata. Spatha solitaria, submembracea longe acuminata. Bracteae inferiores lanceolatae acuminatae subspathaceae flores prope aequantes. Ovarium apicem versus valde incrassatum; sepala lancea acuminata, tepala filiformilinearia; labelli lobi laterales angusti, elongati, basi et apice semicordati, margine externo trilobuli, minute crenulati, lobus medius lanceus acuminatus; carinulae radiantes in lobis lateralibus; callus inter lobos laterales utroque margine longitudinali limbo recto carinato cinctus, apice retusus, lobulatus; carina longitudinalis per lobum medium. Leg. Hartweg! — Rchb. fil. in Bonpl. II. 20. Caracas. Wagener.

188. EPIDENDRUM ANTHOCEROS Lind., Rchb. fil. in Bonpl. II. 281.

Affine Epidendro cornuto Lindl. spathis duabus, racemo longo nutanti, labelli subcordati lobis lateralibus minute denticulatis antice acutis, lobo medio teretiusculo acuto, callis 2 triangulis in basi, callo anteposito.

Planta bipedalis. Folia oblonga acuta. Spathae angustae acutae. Bracteae setaceae. Sepala triangula acuta. Tepala a basi subulata linearia acuta. — Die verwandten Arten haben wir pag. 110 beschrieben, und verweisen wir für das E. cornutum (nach Hartweg's Pflanze) eben auf die dortige Diagnose, indem die Herrn Lindley's nicht ganz genau sein dürfte. Bluthen gelblich. — Neu-Granada. Ocanna. 6 — 8000'. Mai, n. 1157. Schlim.

189. EPIDENDRUM ALPICOLUM Rchb. fil. MSS. Mus. Berol. 1848 Rchb. fil. in Bonpl. II. 110.

Aff. E. cornuto, labelli lobis lateralibus laevibus, lobo medio lanceo utrinque angulato, igitur rhombeo, callis 2 angulatis inter lobos laterales, carinis tribus per lineam mediam lobi medii excurrentibus.

Validum bipedale et altius. Caulis calamum cygneum crassus (ex sicco omnino videtur anceps), obscure flexuosus. Folia linearilanceolata, 5 pollices longa, medio duas tertias lata. Spatha solitaria, vel gemina, acuta, anceps, dorso bene carinata, inferior seu unica (cui tamen minor semper videtur inclusa) 4 — 6 pollicaris. Racemus cylindraceus, multiflorus. Bracteae linearisubalatae, infimae ovariis pedicellatis duplo, reliquae multo breviores. Perigonia sicca chartacea. Sepala lanceolata acuminata basi cuneata, dorsale magis antrorsum insertum. Tepala linearia acuminata basi valde attenuata. Labelli lobi laterales oblongi angusti postice et antice semicordati, latere externo minute crenulati, lobus medius longe productus lanceorhombeus seu ligulatus, marginibus minute crenulatus; calli 2 angulati ante gynostemium in lineas tres contiguas carinatas per lobum medium excurrentes. Merida 1068. Moritz! Wagener!

190. EPIDENDRUM GLOSSOCERAS Rchb. fil. et Warsc. in Bonpl. II. 110.

Aff. E. cornuto Lindl. gracillimum, spathis herbaceis, labelli lobis lateralibus quadratis laevibus, carinis 2 prostratis triangulis in carinam lobi linearis medii excurrentibus.

Bipedale, flexuosum. Folia linearilanceolata acuminata, 6 pollices longa, tertiam pollicis lata (6—7). Spathae subcucullatae apice lanceae 1 — 2. Racemus 3 — 4 pollicaris. Bracteae triangulae apice setaceae ovariis pedicellatis triplo breviores. Flores illis E. cornuti Lindl.! triplo minores. Sepala lanceolata acuminata: tepala lineariligulata subbreviora: labellum cum gynostemio descendenti angulatum, lobi laterales quadrati erecti, margine externo minutissime crenulati, lobus medius linearilanceus; carina triangula projecta utrinque inter lobos laterales antice in carinam longitudinalem lobi medii excurrentes. Peru. Warscewicz.

191. EPIDENDRUM KLOTZSCHEANUM H. G. Rchb. Linn. XXII. p. 838. Huc Lindl. L. c. 450.

E. spathis geminis acutis maculatis, racemo cernuo elongato, bracteis lanceolatis cuspidatis, sepalis oblongis acutis, petalis lanceolatis acutis, labelli trilobi lobis lateralibus rotundatis medio producto acuto lineis 3 elevatis, callis 2 magnis in basi, clinandrio subintegro.

Wild in Venezuela; cool places in the woods of the Sierra Nevada of Merida, in January — Moritz 1069. — Stems very strong. Leaves longish, acute. Flowers brown. — Rchb.

Epidendrum Klotzschianum Rchb. fil. in Bonpl. II. 20. Caracas. Wagener.

192. EPIDENDRUM PARVIFLORUM Fl. Peruv. Syst. 245. LO. n. 68. Huc Lindl. l. c. 152.

E. caule stricto gracillimo, foliis membranaceis lineari-lanceolatis acuminatis, racemi furcati tenuis pedunculo spatha angustissima breviore, sepalis coriaceis, petalis filiformibus, labelli trilobi laciniis integris, lateralibus rotundatis, intermedia divaricatim biloba, venis 3 elevatis.

Wild in Peru; Jambrasbamba — Matthews, 1900 (v. s. sp. in hb. Hooker). — The slenderest species of this group. Stems not thicker than a knitting needle, about one foot high. Spathe about two inches long, extremely narrow and fine-pointed.

193. EPIDENDRUM ARMENIACUM Lindl. in Bot. Reg. t. 1867. Huc Lindl. l. c. 153.

E. caulibus teretibus erectis, foliis lanceolatis coriaceis acutis subplicatis, racemis pedunculatis cylindraceis nutantibus, bracteis setaceo-acuminatis, sepalis patulis ovatis acutis, petalis setaceis, labelli subcucullati laciniis lateralibus rotundatis, intermedia ovata acuminata, callo magno oblongo integro acuto in discum.

Encyclia macrostachya Pöppig and Endl. N. G. et Sp. 2. t. 114.

Wild in Peru; on trees near Cuchero; flowering in December — Pöppig; in Brazil — Miers (v. v. c. et s. sp. in hb. Miers). — Flowers small, apricot-coloured, in a slender drooping spike. Leaves sometimes grassy, sometimes lanceolate.

b. Spatha subsimplex. Flores subumbellati.

194. EPIDENDRUM SCUTELLA Lindl. in Bot. Reg. 1844. misc. 82. Huc Lindl. l. c. 154.

E. foliis coriaceis ovato-lanceolatis distichis, spatha brevi lata acinaciformi pedunculo aequali, racemo umbellato paucifloro, sepalis petalisque lanceolatis, labello oblongo cordato plano obsolete bicalloso.

Wild in Peru; in the woods of Guayan, on the western slope of Pichincha, near Quito — Hartweg (v. s. sp.) — Flowers greenish yellow, very large. Lip full an inch long. Spathe very broad, about an inch and half long. Lip an inch and half long.

— Rchb. fil. in Bonpl. II. 20. Merida. Herr Wagener fand es nie mehrblüthig, wie Herr Hartweg.

195. EPIDENDRUM LAGOTIS Rchb. fil. in Bonpl. III. 68.

Aff. Scutellae tepalis cuneato-oblongis obtusiuscule acutis, labello oblongo basi cordato basi bilobulo calloso.

Caules adsunt quadri- ad quinquepollicares. Folia carnosa oblonga utrinque attenuata apice obtusato nunc retusiuscula. (7 in caule, an ramo?). Spatha basi angustata, apice acuta, utrinque extrorsum curvata. Pedunculus a spatha obtectus; biflorus. Ovaria pedicellata pollicaria (rugulosa, quod ex exsiccandi methodo videtur exortum). Sepala cuneata oblonga, acutiuscula. Tepala subaequalia apice paulo latiora. — Blüthe nur halb so gross wie die des Epidendrum Scutella Lindl., „grün". „An Bäumen. März." Ocanna. Wagener.

196. EPIDENDRUM TENAX Rchb. fil. in Bonpl. II. 20.

Caule tripollicari gracilento valido, verruculoso, bifolio, vaginis brevibus, laminis lineari ligulatis (2 pollices longis, supra basin dilatatis, ⅙ pollicem latis) apice microscopice serrulatis, spatha magna coriacea ancipiti a latere dorsali recta, latere aperto semilunata, flore solitario, brevipedunculato, prope ecuniculato (albo ex sicco), sepalis lineariligulatis apice obtuse acutis, tepalis subaequalibus linearibus, labelli lamina libera cordata oblongoligulata acuta, basi antecolumnari obsoletissime

tricarinulata, gynostemii abbreviati crassi apice trilobi lobo medio adcendente.

Blüthe halb so gross, als die des vorigen. Wagener.

197. EPIDENDRUM GEMINIFLORUM Humb. et Kunth Nov. Gen. et Sp. Pl. I. 354. LO. p. 102. Huc Lindl. l. c. 155.

E. caule repente ramoso, foliis oblongis obtusis coriaceis, pedunculo paucifloro e spatha pollicari orto, floribus coriaceis, sepalis lanceolatis acuminatis patulis margine revolutis, petalis conformibus planis, labello ovato cordato subcucullato trilobo: lobis lateralibus rotundatis ab intermedio sinu brevi sejunctis, callis 3 linearibus elevatis intermedio minore.

Wild in Peru; Popayan, on the trunks of trees — Hartweg: Valley of Lloa — Jamieson: in shady mountain places, at the height of 7400 feet — Humboldt and Bonpland (v. s. sp.) — Stem with dwarf, stiff, erect side branches. Flowers middle-sized, very fleshy, with extremely sharp-pointed divisions, yellowish green, according to Humboldt and Bonpland. Dr. Jamieson's Lloa specimens in the Hookerian Herbarium have broader leaves, and larger flowers, which are also more numerous than in those from Popayan, brought home by Hartweg.

198. EPIDENDRUM PORPAX Rchb. fil. Bonpl. III. 220.

Juxta E. viridibrunneum Rchb. fil. pusillum, foliis ligulatis obtuse acutis vix pollicaribus perpendicularibus, spatha oblique fissa ancipiti uniflora, sepalis lateralibus gynostemio·labelloque ungui basi adnatis triangulis, tepalis linearibus acutis, labello ovato basi ima minute bicalloso, gynostemii androclinio cucullato elevato.

Flores illis E. piperini Lindl. paulo majores, flavi, labello rufo. Ovarium pedicellatum spatha triplo longius. Spathae siccae rufonigrae. In monte Pantasmo in Segovia. Oersted.

199. EPIDENDRUM PEPEROMIA Rchb. fil. in Bonpl. II. 20.

Habitu Centropetali distichi, caulibus bipollicaribus, foliis ligulatis acutis distichis, spathis 2 cucullatis retusis apiculatis, flore solitaria vix cuniculato, sepalis lanceolatis acutis, lateralibus dimidiatis, tepalis angustissime linearibus, labello toti gynostemio adnato, lamina libera cordata rotunda emarginata, carinis 2 in basi abbreviatis.

Blätter $^3/_4$ Zoll lang. $^1/_4$ Zoll breit. Blüthe so gross, wie die des Epidendrum latilabre Lindl. Die Art könnte als ein einblüthiges Amphiglottium betrachtet werden. Es reiht sich auch an Euepidendrum Folia 2456, allein der künstliche Charakter zweier Scheiden entfernt es. Caracas. 5000'. Mai. Wagener.

200. EPIDENDRUM VIRIDIBRUNNEUM Rchb. fil. MSS. Huc: *Epidendrum Centropetalum* Rchb. fil. in Bonpl. III. 68.

Juxta Epidendrum megagastrium foliis lineari-lanceolatis acutis acuminatis, spatha ancipiti apiculata ostio aperto extrorsum acuta, margine altero recto, labello ovali minute denticulato.

Planta pusilla repens habitu Centropetali. Folia vix pollicaria valde coriacea illis Sarcanthi rostrati comparanda. Spatha submembranacea. Sepala lanceolata acuta. Tepala linearia acuta. Labellum nunc ante gynostemium obscure bicarinulatum? Videtur ibi impressum. — „Blüthen grün mit braun." März. 5000'. Ocanna. Wagener.

201. EPIDENDRUM MEGAGASTRIUM. Huc Lindl. l. c. 156:

E. caule repente ramoso, foliis ovato-oblongis obtusis coriaceis, pedunculo paucifloro e spatha duplici laxa abbreviata orto, floribus valde carnosis, sepalis petalisque lanceolatis planis, labello cordato ovato cucullato indiviso basi 2-lamellato area aspera triangulari interposita, cuniculo maximo ventricoso.

Wild in Peru; on trees in the province of Chachapoyas — Mathews (v. s. sp.) —

Very like E. geminiflorum, but the flowers are larger, more fleshy, and have a long distended pouch in front of the ovary. The lip is undivided, has only two calli, and in place of the intermediate lamella there is a dull triangular space, covered with minute asperities.

282. EPIDENDRUM LACUSTRE. Hdc Lindl. l. c. 157:

E. foliis latis obtusis, spatha duplici suprema acinaciformi, racemo brevi umbellaeformi, pedunculis ovariisque 4-plo longioribus, sepalis petalisque linearibus acuminatis patentissimis, labello subcordato-ovato acuminato obsolete trilobo, callis baseos acutis linea elevata interjecta.

Epidendrum leucochilum Lindl. Orch. Linden n. 47. nec Klotzsch.

Wild in Venezuela; on half-submersed rotten trees in the marshes of Laguneta, in the province of Merida, at the height of 8000 feet — Linden 684 (v. s. sp.) — This is described as being from three to four feet high, with the purest white flowers. They are two inches and a half across, and consequently among the largest in the genus.

283. EPIDENDRUM LEUCÓCHILUM Klotzsch in Allg. Gartenz. 11. p. 146. Ic. Plant. rar. berol. t. 46. Paxton's Flower Garden III.; gleanings n. 622. ic. 308. Huc Lindl. l. c. 158.

E. foliis coriaceis obtusis, spatha magna solitaria pedunculo longiore, umbella brevi cernua, sepalis petalisque lineari-lanceolatis patentissimis, labelli trilobi lobis lateralibus magnis oblique orbiculatis, intermedio ovali basi bicalloso lineisque tribus elevatis, clinandrio cucullato truncato.

Epidendrum flavidum Lindl. Orch. Lind. n. 48.

Wild in New Grenada; terrestrial in the cold region near Chitaga in the province of Pamplona, at the height of 9000 feet: April — Linden 2213; Funck and Schlim 1684; province of Ocanna, near S. Pedro, at the elevation of 6000 feet — Schlim 743; Caraccas — E. Otto at the height of 4500 feet (v. s. sp. comm. cel. Linden). — A very fine caulescent plant. Leaves coriaceous, oval, acute. Flowers green, with a snow-white tip. In Funck and Schlim's 1684, the calli at the base of the lip are wrinkled, and seem almost three-lobed and the spathe is not more than three-quarters of an inch long. When the Orchidaceae Lindenianae were published, I only knew this plant by the specific character and description given of it in the Allgemeine Gartenzeitung; and I then supposed it to be different from what a figure in the Icones Berolinenses now shows it to be. Under this misapprehension, when I found it among Mr. Linden's Orchids (n. 2213), I thought it new, and called it E. flavidum, an error which is now corrected.

Epidendrum leucochilum Klotzsch. Rchb. fil. in Bonpl. II. 20. „Paloma blanca." Herbacea. März. 4000′. Wagener.

284. EPIDENDRUM LONGIFLORUM Humb. et Kunth. Nov. Gen. et Sp. Pl. I. 354. I.O. n. 45. Huc Lindl. l. c. 159:

E. foliis oblongis obtusis, racemi nutantis pedunculo spatha maxima breviore, sepalis petalisque lanceolato-linearibus acuminatis margine revolutis, labelli tripartiti laciniis lateralibus ovatis oblique truncatis revolutis: intermedia lineari cuneata mucronata margine revoluta duplo longiore, callis 2 lineisque 3 elevatis.

Wild in New Grenada: on the slope of Mount Puruguay, a lofty point in the Andes near the village of Aguacillas, at the height of 8880 feet — Humboldt and Bonpland; Popayan, near the village of Sotara — Hartweg (v. s. sp.) — A most noble plant, with yellow flowers more than four inches across. Some of the leaves are about a foot long.

285. EPIDENDRUM SPECTATISSIMUM Rchb. fil. in Bonpl. III. 68.

Affine E. longifloro Hb. B. Kth, callis 2 in basi antrorsum rhombeis bidentatis, labelli partitione media lancea acuminata (nec apiculata uti in Epidendro longifloro tantum ex speciminibus Hartwegianis nobis cog-

nito), partitionibus lateralibus more Epidendri leucochili juxta gynostemium, antice retusis, extrorsum semiovatis, basi alte semicordatis, androclinio more Epidendri longiflori apice angusto bidentato.

Caulis quadripedalis. Folia oblonga apice attenuata obtuse biloba. „Spatha magna apice acuta." Racemus cernuus multiflorus. Bracteae lanceo cuspidatae ovariis pedicellatis bi- ad tripollicaribus multo breviores. Sepala lanceolata acuminata. Tepala triplo angustiora basi cuneata. — Blüthen so gross wie die des Epidendrum longiflorum Hb. Kth., nur sind sind die Blüthenstiele nebst Fruchtknoten viel kürzer; Hülle grün, Lippe weiss. 6000'. Auf der Erde. März. Ocaaña. Wagener.

c. Spatha subsimplex. Flores paniculati.

206. EPIDENDRUM TOVARENSE H. G. Rchb. Linnaea XXII. p. 838. Huc Lindl. l. c. 160.:

E. spatha brevi acuta carinata(?), panicula pauciflora, bracteis minutissimis squamaeformibus acutis, sepalis oblongis obtusis, petalis subaequilongis basi cuneatis, labello trilobo lobis lateralibus semiovatis aliquid cuneatis basi bicallosis medio cuneato rotundato antice emarginato margine hinc inde minute denticulato.

Wild in Colombia; Tovar — Moritz 851 (Rchb.) — Leaves few, rather long, sharp-pointed. Flowers white, pink on the outside. — Rchb.

— Rchb. fil. in Bonpl. II. 20. Caracas. 6000'. Wagener.

Obs. Huc forsan pertinebit „Epidendrum sinuosum Lindl." Regel Gartenflora II. p. 324. Tab. 69.: Caule pedali apice compresso, foliis distichis elongato-lanceolatis acutis, racemo terminali brevi erecto, spatha carinata oblonga compressa racemo paullo breviore, bracteis minutis, sepalis lineari-cuneatis petalisque lineari-cochleariformibus margine revolutis; labello trilobo, lobis lateralibus semicordatis acutis postice plicatis denticulatisque, lobo intermedio rotundato basi callis duobus in lineas excurrentibus lineaque elevata interjecta, columna labello adnata. — Flores albi, fragrantes.

207. EPIDENDRUM MESOMICRON. Huc Lindl. l. c. 161.:

E. foliis brevibus oblongis obtusis, racemo basi subpaniculato e spatha brevi obtusa, bracteis linearibus acutis patulis, floribus carnosis, sepalis oblongis petalisque linearibus acutis, labelli trilobi laciniis lateralibus rotundatis serrulatis intermedia parva carnosa ovata per medium obtuse carinata, callis baseos 2 acutis 2que minoribus exterioribus clinandrio margine tenui cincto.

Wild in Bolivia — Bridges (v. s. sp.) — Stem a foot long. Leaves five inches long by one inch and a half broad. Flowers when dried black and brittle. The five calli are remarkable; that in the middle being large, deep, and reaching to the point of the middle lobe of the lip, those next it free at the point, and the outer ones small, but very distinct.

208. EPIDENDRUM AMPLEXICAULE. Huc Lindl. l. c. 162.:

E. vaginis scabris, foliis oblongis amplexicaulibus acuminatis papyraceis, panicula laxa cernua flexuosa, spatha angusta pedunculo longiore, bracteis linearibns acuminatis herbaceis ovario aequalibus, sepalis acutis lateralibus valde obliquis, petalis linearibus acutis venosis, labelli lobis subaequalibus oblongis truncatis apice dentatis lateralibus obliquis, callis 2 elongatis, clinandrio integro.

Wild in Peru; Quito — Jamieson (v. s. sp. comm. cel. Jamieson A. D. 1849). — The habit of this is almost that of some thin-leaved Evelyna. Leaves three inches and a half long by one inch and three-quarters wide. Flowers the size of E. nutans.

209. EPIDENDRUM EXCISUM Lindl. in Bot. Reg. 1844. misc. 82. n. 14. Huc Lindl. l. c. 163:

E. foliis latis oblongis apice rotundatis excisis, spatha brevi lata

coriacea pedunculo longiore, floribus laxe paniculatis, petalis filiformibus, labello basi bicalloso laciniis lateralibus cordatis obsolete crenulatis, intermedia lineari divergenti cuneata retusa.

(B) *grandiflorum*. Flowers with all the parts larger and broader.

Wild in Peru; on the ascent to Sotara, near the village of Tortoro in Popayan — Hartweg; B. rocky banks, Chachapoyas — Mathews 3182; Santa Martha — Purdie (v. s. sp.; B. in hb. Hooker). — This is much like E. floribundum, of which it has the habit, but it has a great sheathing spathe. The variety B sometimes forms great horizontal cucullate spathes, not unlike those of E. spathaceum; this is observable in Purdie's specimens.

210. EPIDENDRUM MODESTUM Rchb. fil. et Warscew. in Bonpl. II. 110.

Aff. E. exciso spathis minoribus, inflorescentia compacta, labello trilobulo, lobulis posticis semirotundis basi alte cordatis lobo medio ligulato brevi retusiusculo, linea media carinata, additis utrinque carinulis 2 in basi.

Folia coriacea oblonga attenuata obtusiuscula, spathae ancipites profunde fissae apice carinato cucullatae, 3—pollicares, panicula pauci- et longius ramosa, rami polyanthi, bracteae lineares minutissimae; sepala ligulata acuta, lateralia margine inferiori obliqua, tepala ab angustissima basi linearia, validissime uninervia, labellum trilobatum, lobuli postici semirotundati basi alte semicordati, margine minute denticulati, sinus inter illos ac lobum medium obtusanguli, lobus medius brevis ligulatus, retusiusculus cum apiculo, calli ancipites obtusi erecti 2 in basi, addita carinula minutissima utrinque, linea media carinata. — Vom Ansehen des E. excisum Lindl., welches ganz breite, stumpfe, mehr lederartige Blätter, grössere, auch mehr lederartige Scheiden, eine schlaffe Inflorescenz und eine ganz verschiedene Lippe zeigt. Peru. Warscewicz.

d. Spathae plures imbricatae.

211. EPIDENDRUM RAPHIDOPHORUM. Huc Lindl. l. c. 164.

E. foliis oblongis obtusis, racemo crasso pendulo spathis pluribus maximis foliaceis longiore, bracteis rigidis acicularibus inferioribus aequalibus, sepalis coriaceis oblongis lateralibus abrupte acuminatis, petalis linearibus reflexis, labelli lobis lateralibus acinaciformibus obsolete denticulatis intermedio oblongo truncato apiculato apice concavo, callis 2 lineaque intermedia.

Wild in the Caraccas; the Silla, at the height of 6500 feet — Funck and Schlim 182; same place, at the entrance of the Paramo de los Conisos ....? 1180 (v. s. sp. comm. cel. Linden). — A strong coarse plant, with the habit of E. nutans, but distinct in its great spathes and long stiff needle-like bracts. Flowers white; according to Funck and Schlim, flesh-coloured according to my n. 1180, procured by the same unknown collector as he, who obtained E. sinuosum.

212. EPIDENDRUM OCHRIODES. Huc Lindl. l. c. 165.

E. spatha foliacea pedunculo longiore, racemo denso multifloro nutante, bracteis minutis setaceis, floribus carnosis, sepalis oblongis cuspidatis, petalis linearibus, labelli trilobi laciniis subintegris, laciniis lateralibus rotundatis intermedia retusa cuneata, callis 2 conspicuis lineaque interjecta obsoleta.

Wild New Grenada; at Matanzas, in Pamplona, at the elevation of 7000 feet; Nov. — Schlim 136 (v. s. sp. comm. cel. Linden). — A plant with the habit of E. nutans; the flowers are not panicled, but in a dense cylindrical raceme six inches long, and there is a large herbaceous spathe at its base. Flowers pale violet.

213. EPIDENDRUM SPATHACEUM Lindl. in Hooker's Journ. III. 85. Huc Lindl. l. c. 166.:

E. racemis alternis densissimis pendulis spathis foliaceis falcatis con-

duplicatis vix longioribus, sepalis rigidis striatis acutis, petalis filiformibus, labelli trilobi laciniis lateralibus obtusis postice obsolete crenulatis, intermedia ovali obtusa basi bilamellata linea elevata interjecta brevioribus.

Wild in Peru; obtained by Mr. Matthews out of the herbarium of Ruiz and Pavon, preserved at Lima; New Grenada; in the province of Pamplona, near Matanzas, at the height of 8000 feet; February — Schlim 110; Mariquita — Triana 125 (v. s. sp. in hb. Hooker et comm. cel. Linden). — The masses of inflorescence of this plant are upwards of one and a half foot long, and consist of dense racemes proceeding from the axil of falcate spathes, so as to have a great resemblance to that of some Palm. „Flowers white and pink. Leaves thick, leathery". — Schlim.

Epidendrum spathaceum Lindl. Rchb. fil. in Bonpl. II. 282. Neu-Granada. n. 1197. Schlim.

214. EPIDENDRUM RANIFERUM LO. 64. Bot. Reg. 1842. t. 42. Huc Lindl. l. c. 167.:

E. foliis distichis lanceolatis, spathis plurimis equitantibus obtusis pedunculo aequalibus, racemis terminalibus lateralisbusque divaricatis multifloris, sepalis oblongis convexis obtusis petalisque linearibus mucronulatis patentissimis, labelli sexlobi basi 2-callosi laciniis integerrimis dentatisque: posticis latioribus — intermediis linearibus — anticis linearibus obtusis retrorsum falcatis.

(A) Lobes of the lip all toothed at the point.

(B) Back lobes of the lip rounded, others linear blunt, all entire.

(C) *luteum*. Flowers bright yellow, with red spots and a whiter lip. Back lobes of the lip confluent, plaited and lacerated.

Wild A in Mexico — Pavon; B and C in Demerara — Schomburgk 424 (v. v. c. et s. sp.) — Something like E. nutans. Flowers greenish, marked with rich purplish brown spots. The species varies in the amount of toothing observable in its lip. In the specimen originally described the divisions were perfectly entire; in others they are all toothed.

In the variety C. which flowered with Messrs. Loddiges, the lip is not six-lobed, but three-lobed only, with the middle lobe emarginate. The lateral divisions are rounded, lacerated, and crisp, like those of some Amphiglotti.

215. EPIDENDRUM CNEMIDOPHORUM. Huc Lindl. l. c. 168.:

E. spathis plurimis foliaceis equitantibus obtusis, racemo brevi multifloro sessili cernuo, bracteis linearibus, sepalis oblongis obtusis, petalis linearibus, columna sigmoidea, labelli lobis carnosis integerrimis lobis lateralibus rotundatis intermedio cuneato bilobo rotundato, callis 2 maximis lineisque tribus elevatis quarum intermedia major.

Wild in Guatemala — Skinner (v. s. sp. comm. cel. Skinner). — Leaves long, broad, acute. Spathes ten, closely imbricated, forming a sheath nine inches long in the specimen before me, just as in raniferum. Flowers fleshy in a short raceme scarcely longer than broad.

216. EPIDENDRUM DISCOIDALE. Huc Lindl. l. c. 169.

E. foliis ellipticis acutissimis, racemi brevis pedunculo spathis pluribus equitantibus acutissimis breviore, floribus carnosissimis, bracteis minutis apice setaceis, sepalis oblongis obtusis, petalis linearibus canaliculatis, labelli transversi circularis lobulo terminali truncato callis 2 acutis lineaque intermedia elevata.

Wild in Dominica — Dr. Imray (v. s. sp. hb. Hooker). — Stem one to one and a half foot high. Leaves six inches long. Flowers erect, larger than in E. nutans, their stalks an inch long. In the centre of the lip is a circular dull space, which seems to be connected with some peculiarity of colour, the nature of which cannot be determined from dry specimens. Much like E. Clowesii, but a stouter plant, with flowers very much larger, and a widely different lip.

217. EPIDENDRUM CLOWESII Bateman in Bot. Reg. 1844. misc. p. 16. Huc Lindl. l. c. 170.:

E. foliis lanceolatis acutis racemo basi spathaceo erecto longioribus, bracteis minimis mucronatis, floribus carnosis, sepalis oblongo-linearibus, petalis filiformibus reflexis, labelli lobis subundulatis rotundatis intermedio bilobo majore, callis 2 minutis cum lineis duabus elevatis lateralibus confluentibus linea intermedia abrupte cis apicem evanida.

Wild in Guatemala — Bateman (v. v. c.) — Although in the only specimen of this plant which I have seen, the spathes of the peduncle are not in the leafy state, that is required for a Spathian Epidendrum, on which account I formerly placed it among Amphiglotts, yet it has so close an affinity to E. discoidale, that I am led to believe my specimen to be starved, and that the spathes which do exist are imperfect, in which case they would in a more natural condition acquire a leafy character. The stem is leafy throughout its whole length. The leaves are nearly six inches long. The raceme short with about fifteen flowers; its peduncle being enclosed in several equitant spathes. Flowers yellowish white, sepals four to five lines long, their stalk about the same length. I formerly overlooked the calli, which are small and not easily distinguished from the raised lateral lines, which proceed from them.

218. EPIDENDRUM XANTHOLEUCUM H. G. Rchb. Linn. XXII. p. 839. Huc Lindl. l. c. 171.

E. spathis numerosis fastigiatis acutis, racemo recurvo multifloro, bracteis minutis acutis, sepalis oblongis obtusis cuneatis, sepalis linearibus apice dilatatis, labelli trilobi lobis lateralibus rotundatis sinu obtuso disjunctis a lobo medio abbreviato cuneato antice bilobulato, callis 2 maximis linea longa elevata interjecta.

Wild in Venezuela; at Chachopo in the province of Merida; at the height of 9000 feet — Funck and Schlim 852 (v. s. sp. comm. cel. Linden). — Stem a foot and more high, clothed with long obtuse leaves. Spathes numerous, collected in a cluster at the foot of the raceme, which is eight inches long and almost parallel with the stem down which it hangs. Flowers yellowish with a white lip.

219. EPIDENDRUM HARRISONIAE Hook. in Bot. Mag. t. 3209. Huc Lindl. l. c. 172.

E. caule folioso tereti, foliis elongato-obtusis cum mucrone, pedunculo flexuoso elongato spathis pluribus acuminatis vestito, racemi 7—8-flori abbreviati nutantis axi pedunculo multo breviore, bracteis squamaeformibus acutis, sepalis petalisque oblongis coriaceis obtusis his paulo angustioribus, labelli carnosi tripartiti cordati basi bituberculati laciniis lateralibus oblongis truncatis intermedia cuneata apiculo reflexo.

Epidendrum aeridiforme Booth in Bot Reg. 1845. misc. n. 12.

Wild in Brasil; on rocks in the Organ Mountains; April — Gardner 5868 (v. v. c. et s. sp. in herb. Hooker). — This plant in habit and mode of growth bears some resemblance to E. nutans. Flowers green, sometimes touched with reddish brown.

§ 9. *Amphiglottium* Lindley in Hooker's Journal of Bot. III. 81; Bot. Reg. 1844. misc. 24. Amphiglottis, Salisbury in Hort. Trans. I. 261.

The character of Amphiglott Epidendrums consists in a long leafy stem with distichous leaves, an absence of any tendency to form pseudobulbs, a peduncle suddenly covered with close sheaths, and a lip wholly united to the column. They join the last section of Spathian Epidendrums through E. Harrisoniae, which section consists of Amphiglotts in all respects except that the bracts are spathaceous and herbaceous, or foliaceous.

ANALYSIS OF THE SECTIONS.

Flores vere paniculati . . . . A. *Polycladia.*

Flores racemosi (raro in paniculam racemosam luxuriantes.)

  Labellum indivisum . . . . B. *Holochila.*

  „ lobatum.

    laciniis omnibus integris . . . . C. *Schistochila integra.*

    laciniis laceris.

      lobo medio lamellato . . . . D. *Schistochila carinata.*

      lobo medio nudo basi bicalloso . . E. *Schistochila tuberculata.*

† Labellum liberum seu subliberum. (*Amblostoma* Rchb. fil.)

220. EPIDENDRUM ELEGANS Rchb. fil. MSS. — *Barkeria elegans* Knw. et Westcrou Floral Cabinet II. t.49.: Sepals spreading or reflexed, somewhat connate at the base. Petals somewhat equal or a little broader. Lip free, parallel with the column, flat or compressed, furrowed, winged, resting upon the lip. Anther fleshy, 4-celled, — Perigonii foliola roseo-lilacina, gynostemium superne album apice flavum purpureo apiculatum, maculis purpureis, inferne viridi, alis albis purpureo adspersis.

— Bot. Reg. XXIV. 1838. sub T. 20.

Sepala patentia vel reflexa, basi subconnata; petala subaequalia vel paulo latiora; labellum liberum, cum columna parallelum, limbo indiviso, disco costato; columna elongata, plana vel compressa sulcata, alata, super labellum incumbens; anthera carnosa, 4 locularis, septum marginibus membranaceum; pollinia 4, caudiculis totidem ligulatis reflexis, per paria subconnatis.

Herba epiphyta Mexicana, pseudobulbosa (?) foliis alternis, vaginantibus, subcarnosis, scapo terminali racemoso. Knw. et West. Floral Cabinet. 7.

Barkeria elegans Knw. West. The only species mentioned is B. elegans, a beautiful Mexic. plant, with delicate lilac flowers.

— Bot. Reg. XXVI. 1840. Misc. 57.:

Sepala et petala aequalia, libera, membranacea, patentissima; labellum planum integerrimum, nudum (cuneatum c. apiculo) columnae adpressum; columna petaloidea; anthera 4 locularis, carnosa, septorum marginibus membranaceis; pollinia 4, caudiculis totidem ligulatis reflexis, per paria connatis.

Herba epiphyta, caulibus fusiformibus carnosis. Fol. angusta, membranacea, nervosa, Pedunculi longi, graciles, squamati, terminales, apice ramosi. Flores magni, conspicui, nutantes. — An elegant little Mexic. Orch. plant, with tapering fleshy stems like those of a meagre Cycnoches, narrow lanceolate acuminate membranous leaves and a terminal inflorescence, in the form of a raceme of a few large bright pink flowers. Well fig. in Floral Cab. and rivals the Cattleyas in gaiety of appearance. Diff. of cultivation, great rarity.

— Brogniart. Ann. sc. nat. XVII. 1842. p. 44.:

Sepala aequalia, libera, patentia vel reflexa; petala expansa rotundato unguiculata sepalis aequalia; labellum integrum planum membranaceum obovatum, apice emarginatum, basi incrassatum non callosum; columna labello arcto appressa, libera, late marginato-alata subpetaloidea apice utroque latere tuberculata. Clinandrium membrana sinuata marginato-auriculatum; anthera opercularis 4 locularis, loculis septis margine membranaceis distinctis; pollinia 4, caudiculis crassiusculis replicatis geminatim postice unitis; stigma parvum triangulare. Ovarium gracile trigono cylindricum sulcatum; calcar infundibuliforme e basi labelli et columnae nascens, in ovario reconditum ejusque dimidiam partem aequans.

Diff. a Broughtonia sepalis reflexis, lateralibus, labello et columna liberis, columna late alata elongata, calcare non ovario adnato sed immerso.

Barkeria elegans? Knw. et Westr. 49.

var. β. foliis oblongo-lanceolatis laevibus subenervibus, nervo medio tantum distincto, scapo subunifloro. (Mexico D. Ocampo.) — Caules fasciculati, ramis arborum impositi, carnosi, elongato fusiformes, 3—5 pollicares subtetraphylli, vaginis foliorum nervosis vestiti, quandoque abbreviati subbulbiformes. Folia aeque distantia laete virentia, limbo oblongo-lanceolato acuto laevi subcarnoso, nervo medio infra carinato. Scapus terminalis gracilis squamosus uniflorus (2—3 fl., florib. abortiv.).

— Bot. Mag. 4784. — Pescatorea t. 10. — Van Houtte Flore des Serres IX. 959. — Lem. Ill. hort. tab. 23.

221. EPIDENDRUM MELANOCAULON Rchb. fil. MSS. Huc: *Barkeria melanocaulon* Rich. et Gal. tab. 19.

Caule erecto, tereti, atropurpureo; foliis approximatis ellipticis acutis; flor. roseis; sepalis internis obtusis.

Mexico. — Annales des sc. nat. 1845. Janv. p. 22.

222. EPIDENDRUM LINDLEYANUM Rchb. fil. MSS. Huc: *Barkeria Lindleyana* Batem.

Foliis ovalibus acutis, bracteis linearibus pedunculo multo brevioribus; labello exacte oblongo apiculato bicarinato carina altera sub apice interjecta, unguiculato plano basi columnae adnato, columna clavata alata apice tridentata immaculata.

Appearance of Epidendrum Skinneri, with which it would le conf. But is has the winged column, and the labellum with a thin membranous border down far below the head of the column. It is however to be observed, that in the original Barkeria the labellum was absolutely free and sessile; while in the present species it has a distinct unguis connate with the base of the column. — Flowers of a rich deep purple; sepals and petals of equal size, linear lanceolate, directed forwads in the same manner, as in the original species; the petals are rather broader than the sepals. Labellum ³/₄" long, exactly oblong rich purple, except nearly white in the mid. The anther is sunk with in the 3 teeth of the column, and is depressed in the middle while it is elevated at each side; it is very fleshy, and countains 4 cells, in which are located as many pollenmasses, each having a powdery strap bent back upon it. — Costa Rica. Skinner. — Floruit plusquam 7 hebdom. ap. Batem. — Bot. Reg. XXVIII 1842 Misc. 5. — Bat. Orch. Mex. 1842. tb. 38.

223. EPIDENDRUM SPECTABILE Rchb. fil. MSS. Huc: *Barkeria spectabilis* Batem. in Litt. Bot. Reg. XXVIII. 1842. Misc 45.

Racemo multifloro laxo, labello ovato-lanceolato tricarinato, sepalis lineari-lanceolatis, petalis ovatis acuminatis.

Under the name of *Flor de Isabal* the plant forms one of the votive offerings of the Guatemalese. It formes a tuft of cylindrical stems about 4—5 inches high, each of which bears two fleshy lanceolate acute leaves, separated from each other by intervals of about an inch. The raceme arises out of some brown dry sheaths, and in the plants that have flowered bears about six most lovely nodding blossoms: but according to a memorandum from M. Skinner now before me, it varies in length from 3 inches — a foot: and indeed I possess a wild specimen from that gentleman with as many as twelve flowers in a raceme. The expanded flowers are nearly 3 inches and a half wide, their colour is a bright lilac, the sepals are linear lanceolate, the sepals ovate-lanceolate in form and unspotted but the labellum is white at the base and in the middle, lilac at the edge and point, and richly marked with small blood red spots. Along its middle, below the column are five purple lines, which pass into three elevated colourless ridges, beyond the place where the anther touches the lip. — Bat. Orch. 33: Caulibus brevibus foliosis 2—phyll. — Guatemala. Skinner. Hartweg. Mexico. Karwinski.

224. EPIDENDRUM PENTADACTYLUM Rchb. fil. in Seemann Bonpl. II. 89.:

Labelli quinquepartiti callo depresso antice bidentato per discum communem.

Caulis bipedalis arcte vaginatus gracilis apice tenui ramosus; rami ascendentes — 7 foliati. Vaginae asperulae. Laminae ligulatae acutae gramineae — 3 pollices longae, ¼" latae. Racemus capitatus basi unisquamatus, densiflorus, pluriflorus (1,5''' longa perigonia!), cernuus. Bracteae lanceae ovario pedicellato gracili multo breviores. Sepala ac tepala paulo latiora oblonga acuta. Labelli unguis ima basi cum gynostemio connatus, partitiones posticae ligulatae apice exciso bilobae divaricatae; anterio-

res lineares obtusatae; lobus anticus ligulatus apice retuso hinc crenulato bilobulus. Gynostemium bene ampliatum, pro genere latum. Iraru. 9000'. Oersted. — Rchb. fil. Xenia I. Tab. 48. I. 1—4.

†† Labellum adnatum.

A. POLYCLADIA.

a. Panicula effusa pyramidalis.

225. EPIDENDRUM NUTANS Swartz Fl. Ind. Occ. I. 1490; Hooker Exot. Bot. I. t. 50. LO. n. 44. Huc Lindl. l. c. 173.:

E. foliis oblongis distichis undulatis obtusis, panicula divaricata nutante multiflora ramis basi spathaceis, sepalis oblongo-lanceolatis petalisque lineari-lanceolatis obtusis patentibus, labelli trilobi lobis lateralibus subrotundis, intermedio transverso truncato apiculato basi bicalloso venis tribus elevatis.

(B) *dipus*. Middle lobe of the lip divided into two linear arms. Flowers brownish green with a white lip.

Epidendrum dipus Lindl. in Bot. Reg. 1845. t. 4.

Wild in the West Indies; mountains on the west of Jamaica — Swartz; B. Brazil in rocky places — Von Martius (v. v. c. et s. sp.) — Flowers sweet-scented in the evening, quite green in general, but brown-green and white in B., which has a shorter and more compact inflorescence, and a differently shaped lip, but which I do not now regard as a species.

226. EPIDENDRUM PANICULATUM Fl. Peruv. Syst. p. 243. LO. 61. Huc Lindl. l. c. 174.:

E. foliis oblongis acuminatis, pedunculo vaginis acuminatissimis membranaceis vestito, panicula composita divaricata, bracteis pedicello brevioribus, sepalis oblongis, petalis filiformibus, labelli quadrilobi laciniis posticis brevibus semicordatis obtusis: anticis linearibus divaricatis, callis duobus lineisque 3 brevibus elevatis contiguis.

Epidendrum laeve Lindl. in Bot. Reg. 1844. p. 17.

(B) *longicrure*. Leaves very acuminate. Front lobes of lip very long and falcate.

(C) *cuspidatum*. Leaves oblong, suddenly cuspidate.

Wild in Peru; Popayan — Hartweg: New Grenada — Funck and Schlim 1448; Schlim 68; Venezuela — Funck and Schlim 732; Caraccas - Linden 616; B Peru — Maclean; Bolivia — Bridges; C. Peru — Matthews (v. s. sp.) — A noble species; its panicle, which is eight or nine inches long and nearly a foot broad, being crowded with flowers. It is common all over tropical South America, varying with a more or less dense inflorescence, and in the colour of the flowers, which are said to be green with a white lip (732), or lilac (68 and 1448), and very sweet-scented. The roughness, which is found on the sepals of some specimens seems to be accidental. The two most striking forms, that I have seen are the varieties B and C.

Epidendrum laeve Lindl. Rchb. fil. in Bonpl. II. 110. Wir glauben, dass das E. syringaeflorum Wzw. in litt. in die reiche Formenreihe dieser Art gehört, von der wir doch vermuthen möchten, dass sie sich gegen die neuere Ansicht als verschieden von E. paniculatum Ruiz, Pav. ausweiseu wird. E. paniculatum kennen wir nur in Exemplaren von Hartweg und Ruiz: die selbst beim Abblühen gedrängte Rispe und die Rauhigkeiten an den Kieln der Perigonnerven auf der Aussenseite scheinen uns constant. — Rchb. fil. in Bonpl. II. 282. Blüthen lila. Sehr aromatisch. Pamplona: la Baja. 8000'. 1849. n. 1174. Schlim.

227. EPIDENDRUM FASTIGIATUM. Huc Lindl. l. c. 175.:

E. foliis anguste oblongis acutis, pedunculo vaginis acuminatis membranaceis vestito, panicula composita rigida pyramidali, bracteis rigidis

acuminatis pedicellis contortis subaequalibus, sepalis oblongis basi angustatis, petalis filiformibus, labelli quadrilobi laciniis posticis brevibus rotundatis, anticis linearibus divaricatis, callis 2 elongatis costisque 3 crassis axin labelli occupantibus, columna apice carnosa utrinque biloba.

(A) Leaves oblong, six inches by one and a quarter.

(B) Leaves linear oblong, six inches by half an inch.

Wild in New Grenada; province of Mariquita — Triana 127 (A) 136 (B) (v. s. sp. comm. cel. Linden). — Very like E. paniculatum, but with a more erect panicle, with stiffer branches, longer and stiffer bracts, and much shorter flowers. Its pollenmasses are four, acuminate, and unequal, the inner of each pair not being one third the size of the others; to each pair is a single replicate strap, proceding from the blunt end of the masses. This is very like what Mr. H. G. Reichenbach takes as the main feature of his genus Pseudepidendrum.

228. EPIDENDRUM LAXUM Pöpp. et Endl. N. G. et Sp. II. p. 2. Huc Lindl. l. c. 176.:

E. „caulibus repentibus adscendentibus ancipitibus, foliis lanceolato-oblongis acutis, panicula terminali elongata laxa multiflora, sepalis erectis subaequalibus lanceolatis acutis, labelli columna triplo longioris ovalis subcordati apice breviter trifidi nudi laciniis integerrimis intermedia majore acutiore.

Wild in Peru; on trees in woods on the eastern subandine slope, at the farm of Cochero, in February — Pöppig. — Stems above a foot high on a long creeping rhizome. Leaves seldom more than three on each, with a spiny point. Panicle a foot long or more. Flowers small, pale green.

229. EPIDENDRUM PORPHYREUM Lindl. in Hook. Journ. III. 86. Huc Lindl. l. c. 177.:

E. foliis distichis oblongis acutissimis, squamis spathaceis dense imbricatis acuminatis pedunculo longioribus, panicula simplici multiflora, sepalis oblongis acutis lateralibus falcatis, petalis lineari-spathulatis, labelli trilobi laciniis lateralibus rotundatis intermedia quadrata bidentata: disci axi elevata apicem versus bicallosa basi bicornuta.

Wild in Peru; on trees in the Andes of Popayan — Hartweg; woods on the eastern side of Pichincha, at an elevation of 7000 feet — Jamieson (v. s. sp.) — very like E. paniculatum; but abundantly distinct in the customary calli being long and horned, and in the presence of two supplemental calli on each side the main rib of the lip. Flowers larger than in E. paniculatum, deep orange red or purple.

230. EPIDENDRUM FUNKII H. G. Reichenb. in Linn. XXII. 839. Huc Lindl. l. c. 178.:

E. panicula multiflora, bracteis brevissimis lanceolatis obtusis, sepalis oblongis acutis, petalis cuneatis apice obtuse trilobis, labelli trilobi lobis lateralibus oblongis latere externo retusis denticulatis, medio cuneato antice retuso, callo bicruri in basi lamella erecta interposita.

Wild in Pamplona; at an elevation of 7500 feet; January 1847 — Funck and Schlim. 1436. — Leaves rather long, sharp-pointed with wide sheaths. Flowers whitish tinged with violet. — Rchb. It does not seem clear in Mr. Reichenbach's mind whether this is an Amphiglott or not. I cannot find any species to which the definition applies.

Huc: *Epidendrum Funkii* Rchb. fil. 1849. — Rchb. fil. in Bonpl. III. 68. Diese Pflanze begründet noch einige Zweifel, zumal weder von E. Blepharistes Bark., noch von E. brachycladium Lindl. Originale vorliegen. — Die Pflanze von Pamplona 1436 hat einen am Grunde spindelförmig trugknolligen Stamm, welcher an Schomburgkia erinnert und wäre so zu beschreiben: caulis basi fusiformi pseudobulbosus, superne foliosus. Folia sicca pergamenea basi cunneata oblongo-lanceolata 8 pollicaria, prope duos pollices lata. Inflorescentia elongata. Apex ..... Rami laterales curvuli. Bracteae triangulae acutae ovariis pedicellatis breviores. Pedicelli minute velutini. Perigonia abbreviata. Sepala oblonga acuta carinata, lateralia falcata. Tepala spatulata apice trilobula. Labellum transversum trilobum: lobi laterales ligulati extus

retusi denticulati transversi, lobus medius cuneatus apice truncatus, denticulatus, calli 2 triangnli in basi; carinula a basi in discum. — Ein Labellum quadrilobum, welches E. Blepharistes besitzen soll, ist nicht vorhanden. Eher passt das E. brachycladium Lindl. 1853. — Nun aber sendete Hr. Wagener Exemplare, welche sich auszeichnen durch völlig gleiche Verhältnisse, doch sind die Blätter viel schmäler (kaum einen Zoll!). Die seitlichen Inflorescenzen finden sich in den Achseln der Scheiden angelegt, nur die endständige ist entwickelt. Die Verhältnisse der Blüthe sind fast wie bei voriger. Allein das Labellum ist trilobum: lobi postici semirotundi, lobus medius cuneatus bilobus, antice fimbriatus. Tepala rhombea acuta minute denticulata. — Gehören nun diese Formen zusammen und das ganze E. Funkii zu Blepharistes Barker? — Ocanna. Wagener.

231. EPIDENDRUM HAENKEANUM Presl. Rel. Haenk. 100. LO. n. 40. Huc Lindl. l. c. 179.:

E. foliis distichis ovato-lanceolatis nervosis acutis, spica paniculata, sepalis oblongo-lanceolatis acutiusculis in basin attenuatis, petalis spatulatis, labelli trilobi lobis lateralibus rotundatis, medio minore obcordato.

Wild in Peru — Haenke. — Scape a foot high. Sepals ten lines broad. Perhaps E. porphyreum.

232. EPIDENDRUM PALLIDIFLORUM Hook. in Bot. Mag. t. 2980. LO. n. 41. Huc Lindl. l. c. 180.:

E. foliis distichis oblongis linearibus obtusis pedunculo distanter vaginato brevioribus, sepalis petalisque lanceolatis obtusis patentibus, labelli trilobi lobis subaequalibus rotundatis: intermedii trisulci 2-callosi marginibus involutis.

Wild in Dominica — Imray (v. s. sp. comm. cel. Henslow). — Flowers pale yellowish white, with a purple stain on the end of column. The specimen figured in the Botanical Magazine was weak. The inflorescence is really a loose panicle. I do not find any sufficient authority for its being a native of St. Vincent's.

233. EPIDENDRUM HYMENODES. Huc Lindl. l. c. 181.:

E. foliis gramineis lanceolatis acutissimis pedunculo longioribus, panicula erecta pauciramosa, bracteis lanceolatis membranaceis floribus subaequalibus, sepalis petalisque tenuibus carnosis angustis acutis patentissimis, labelli hastati lobis ovatis intermedio acuto integerrimo, lateralibus serrulatis (?), lamellula elevata ante antheram lineolisque 2 elevatis, clinandrio subintegro.

Wild in New Grenada; on trees in the province of Sa. Martha, at the elevation of 8000 feet; in lofty forests above Minca; July — Schlim 986 (v. s. sp. comm. cel. Linden). — This remarkable plant has much the appearance of some broad-leaved Grass. The thin narrow panicle is copiously clothed by long membranous bracts, which, in the dried state, strikingly contrast with the black flowers. The latter are much decayed in my specimen, and the structure above assigned to them is not to be altogether relied upon; they seem to have been both membranous and succulent, in the dried state are about an inch long, and are described by Schlim as dirty white.

234. EPIDENDRUM MIERSII. Huc Lindl. l. c. 182.:

E. foliis ovato-oblongis acutis, panicula ampla divaricato-ramosa pauci-vaginata, bracteis minutis, sepalis lineari-oblongis acutis, petalis filiformibus, labelli lobis lateralibus oblongis integerrimis, intermedio bipartito cuneato laciniis fimbriatis, callis 3, clinandrio cucullato membranaceo indiviso.

Wild in Brazil; Organ Mountains — Miers 1838; Demerara — Schomburgk (v. s. sp. in hb. Miers). — A most distinct plant with a great branching panicle of (apparently) yellow flowers, having a similar form to those of E. Weddelii.

235. EPIDENDRUM MYRIANTHUM. Huc Lindl. l. c. 184.:

E. foliis lineari-lanceolatis acutis vaginis nigro-punctatis, paniculae

compositae effusae ramis divaricatis, bracteis setaceis, pedicellis ovariisque longissimis, sepalis membranaceis oblongis obtusis, petalis lineari-spathulatis, labello longiore 4-partito bicalloso laciniis truncatis linearibus aequilongis recurvis lateralibus subintegris, intermediis apice tantum laceris, clinandrio utrinque carnoso obtuso appendice dorsali membranacea cucullata bifida.

Wild in Guatemala — Klee (v. s. sp. comm. cel. invent.). — A most brilliant species, conspicuous with its narrow leaves, whose sheaths are spotted with black, and great panicles of membranous ruby-red flowers.

b. Paniculae laterales, racemosae.

286. EPIDENDRUM BLEPHARISTES Barker in Bot. Reg. 1844. misc. p. 80. Huc Lindl. l. c. 185.:

E. foliis anguste ovalibus elongatis obtusis, panicula simplici stricta racemosa, sepalis ovalibus, petalis acuminatis, labelli quadrilobi laciniis aequalibus linearibus apice multifidis linea media elevata callisque duobus semiliberis arcuatis ad basin.

Wild in La Guayra — Linden; Venezuela — Funck and Schlim 1486 (v. v. c. et s. sp. comm. cel. Linden). — The habit of this species is altogether that of polyanthum. The sepals and lip are a rich rose-colour; the column has the deepest tint of the garnet, which gives the flowers a very gay appearance.

287. EPIDENDRUM BRACHYCLADIUM. Huc Lindl. l. c. 186.:

E. foliis angustis oblongis carinatis obtusis apiculatis, panicula angusta racemosa, bracteis parvis ovatis acutis squarrosis, sepalis oblongis, lateralibus valde obliquis carinatis, petalis rhombeis, labelli longioris transversi laciniis lateralibus cuneatis intermediaque parva biloba denticulatis, callis 2 apice liberis lineaque elevata interjecta.

(A) Petals and lip but little toothed, or even entire.

(B) *crassipes*. Petals and lip much toothed or fringed. Stem fusiform at the base.

Wild A. in Peru; Huanuco — M'Lean, Mathews; Bolivia — Bridges; B. Caraccas Sa. Marthe — Purdie (v. s. sp. B. in hb. Hooker). — The narrow panicle, fleshy flowers, great wedge-shaped and small two-lobed divisions of the lip, are peculiar to this species. B. has a stem like that of E. Stamfordianum, and has both petals and lip very considerably denticulate; but in the latter respect each variety varies much.

288. EPIDENDRUM POLYANTHUM LO. n. 50. Bateman Orch. Mex. et Guat. t. 34. Huc Lindl. l. c. 187.:

E. foliis distichis ovali-lanceolatis acutis, panicula stricta simplici racemis plurimis multifloris cernuis basi spathaceis, sepalis ovato-lanceolatis acutis striatis, petalis linearibus reflexis, labelli trilobi tricostati lobis lateralibus subcuneatis retusis: intermedio retuso, ovario scabro.

(A) Flowers rich orange-colour.

Epidendrum funiferum Morren Ann. Gand. IV. 211. t. 198.

Epidendrum bisetum Lindl. in Bot. Reg. 1841. misc. 148.

(B) *densiflorum*. Flowers greenish, with a little pink on the edges and in the middle of the lip.

Epidendrum densiflorum Hook. in Bot. Mag. t. 3791.

Epidendrum rubrocinctum Lindl. in Bot. Reg. 1848. misc. 20.

Wild in Mexico; A Talea — Hartweg: Vera Cruz — Galeotti 5125, in the hot country; B. Parkinson (v. v. c. et s. sp.) — Flowers in A. orange or salmon-colour, with a strong smell of cowslips; in B. pale green. I am unable to discover any distinction beyond colour among the plants now brought together. I do not find an authentic specimen of E. densiflorum in Sir W. Hooker's Herbarium. E. funiferum is no doubt to be referred here, the locality given by Prof. Morren, St. Catharine's, being certainly erroneous.

Huc: *Epidendrum* (Spathium) *colorans* Klotzsch. Allg. Gtz. 1851. 250.

Caule simplici, tereti, folioso, foliis distichis, patenti recurvis oblongis, brevi acutis, subcarinatis, pallide viridibus, racemo brevi, terminali, punctato scabro, spatha ancipiti, dorso crenulata, diphylla, floribus parvis, roseo albicantibus, brevi-pedicellatis, bractea lanceolata, pallide lilacino suffultis, perigonii foliolis albido-subroseis, spathulatis, interioribus subbrevioribus angustioribusque, labelli trilobi lobis lateralibus brevioribus integerrimis, subobliquis, intermedio elongato, apice bilobo, lamellis 3 parallelis, angustis instructa; columna elongata, triangulari, inferne attenuata.

Caulis teres, pedalis, foliosus, crassitudine pennae cygneae. Folia 4½ pollices longa, 14 lin. lata. Racemus terminalis, 2 pollicaris. Flores penduli, brevi pedicellati. Bracteae 2 lineas longae. Perigonii foliola subspathulata, obtusa, patentissima, primum albida, deinde dilatato rosea, exteriora 5 lin. longa, 1½‴ lata, interiora angustiora, paululum breviora. Labellum trilobum columnaque triangulari candidum, anguste trilamellatum, lobis lateralibus brevioribus, obliquis, intermedio elongato, obtuso, apice bifido. — Guatemala v. Warscewicz.

Epidendrum Lansbergii Rgl. (Amphiglottium A. Polycladia Lindl.) Cat. Hort. Petrop. 55.

Caulis elongatus, simplex, foliatus; foliis distichis oblongo-lanceolatis, acuminatis. Panicula simplex, nutans; pedunculo vaginis membranaceis longe acuminatis vestito; bracteis pedicellum (nec germen) aequantibus; pedicello germineque papilloso. Flores virides; sepalo supremo cuneato-oblongo, apiculato, sepalis lateralibus supremo paullo latioribus; petalis filiformi-spathulatis; labelli ungue columnae adnato, lamina late obcordata quadriloba, lobis lateralibus semicordato-angulatis, lobis anticis divaricato-oblongis apiculo interjecto, callis duobus basilaribus costisque tribus crassis elongatis axin labelli occupantibus; columna semitereti adnata.

Caulis ad 6 pedes altus, ½ pollices crassus. Folia ad ¾ pedem longa et 1½ pollices lata, superiora tenuiora. Flores ¾ pollicis in diametro, labello albido. Affine E. paniculato et fastigiato, panicula simplici, sepalorum et loborum anticorum labelli sicut foliorum forma diversum. E. porphyreum differt florum colore et sepalorum labellique forma. — Venezuela. Floret Octobri. Landsberg plantam vivam misit.

239. EPIDENDRUM LIGNOSUM La Llave Orch. Mex. II. 28. LO. n. 42. Huc. Lindl. l. c. 188.:

E. caulibus ramosissimis lignosis, foliis distichis lineari-lanceolatis confertis emarginatis, sepalis petalisque patentibus ...., labelli 3-partiti lacinia intermedia convexa integra, florum fasciculis sparsis.

Wild in Mexico; on trees on the mountains of Valladolid — La Llave. — Flowers green, dotted. Lip with three purple streaks at the base.

240. EPIDENDRUM MARTIANUM Lindl. in Ann. Nat. Hist. IV. 382. Huc Lindl. l. c. 189.:

E. foliis distichis angustis lanceolatis, panicula stricta simplici, squamis concavis obtusiusculis vaginata, racemis corymbosis, petalis linearibus obovatis obtusis sepalis multo angustioribus, labello cordato subrepando basi bicalloso lineis 3 elevatis.

Wild in Brazil; on plains near Villa Rica, in the Minas Geraes — Martius (v. s. sp. in hb. Mart.) — Stem from one and a half to two feet high. Flowering stem stiff, erect, branched, much longer than the leaves, which are narrow and sharp-pointed.

B. *HOLOCHILA.*

241. EPIDENDRUM CORYMBOSUM. Huc Lindl. l. c. 190.:

E. caule ramosissimo, foliis lanceolatis acuminatis racemo corymboso

longioribus, pedunculo basi 1—2-bracteato, bracteolis setaceis pedicellis brevioribus, floribus membranaceis, sepalo supremo angusto, lateralibus latioribus semiovalibus acutis, petalis linearibus basi tenuissimis uninerviis, labello subrotundo cordato obtuso, callis 2 lineaque brevi elevata interjecta.

Epidendrum dichotomum Lindl. in Bot. Reg. 1838. misc. n. 146; not of Presl. Wild in Brazil — Miers n. 3484; Organ Mountains, on an old tree — Gardner 631; Demerara — Loddiges; Venezuela, on trees in the forests of Merida at 5500 feet — Linden 647 (v. s. sp. et v. c.) — A small branching species with the appearance of E. anisatum; but the leaves are thinner, the bracts setaceous, and the lip quite membranous without lobes. Flowers green.

242. EPIDENDRUM CARINATUM. Huc Lindl. l. c. 191.:

E. caule brevi tenui erecto, foliis paucis membranaceis striatis lanceolatis acutis, racemo subrotundo cernuo, bracteis setaceis ovario subaequalibus, sepalis lanceolatis carinatis, petalis linearibus, labello undulato circulari 3-lineato callis 2 angustis, clinandrio cucullato emarginato.

Wild in Mexico; Sierra San Pedro Nolasco, Talea etc. — Jurgensen 647 (v. s. sp. in hb. Hooker). — A small thin-leaved plant with the habit of E. fuscatum.

243. EPIDENDRUM MISERRIMUM Rchb. fil. in Bonpl. III. 220.

Pone E. carinatum (L. F. 191.) tenuiculum, foliis linearibus acutis, dorso carinatis, spica pauciflora, labello triangulo humeribus posticis rotundatis involutis.

Pusillum, 2—3 pollicare. Caules tenuiculi ramosuli subflexuósi. Folia linearia acuta, dorso carinata, carinis vaginam descendentibus, abbreviata, vix pollicaria, lineam lata. Spathula anceps obtusa sicca solitaria. Spica tri — novemflora, disticha. Bracteae carinatae triangulae nervosae. Flores horizontales, bracteis reversis Ovaria demum sphaerica. Sepala triangulo lanceolata. Tepala lineari subfalcata. — Planta facie Epidd. microphylli et parasitici. — Ind. occ. Duchassaing.

244. EPIDENDRUM SETIFERUM Lindl. in Ann. Nat. Hist. IV. 383. Huc Lindl. l. c. 192.:

E. foliis lanceolatis acutis, caule simplici, pedunculo squamis lineari-lanceolatis acuminatis sub floribus foliaceis vaginato, racemo cernuo pyramidali, bracteis longis setaceis, petalis linearibus obtusis sepalis angustioribus, labello cordato integerrimo acuto reticulato basi 3-tuberculato, clinandrio integro.

Wild in Brazil — Gomez (v. s. sp.) — Has the habit of E. fuscatum, but shorter leaves, longer bracts and a different lip. The flower stem is about ten inches long in the specimen before me.

245. EPIDENDRUM VIEJI (Amphyglottium Holochila) Rchb. fil. in Bonpl. III. 220.

Pone Epidendrum setiferum caulibus membranaceo vaginatis di—triphyllis, foliis coriaceis oblongis subacutis nitidis, racemo brevi basi 1—2 squamato, squamis bracteisque sessilibus lanceis scariosis, tepalis cuneato ovatis, labello cordato orbiculari apice emarginato, carina hippocrepica ante basin.

Planta egregia a cl. Oersted unico, a Pavonio pluribus speciminibus lecta, ab hoc E. fastigiatum de Mexico dictum. Rami novelli prodeunt ex axillis vaginarum ramorum vetustorum. Folia tres pollices longa, prope duos lata, vernixia. Flores illis Epidendri elliptici Grah. aequales, bene coriacei. Sepala triangula et tepala ex icone picta Oerstediana carnea purpureo tristriata. Labellum flavido carneum uti gynostemium. Callus purpureus. — Bracteae ovariis pedicellatis plus minus breviores. In summo monte ignivomo El Viejo Nicaraguae. Oersted. — Rchb. fil. in Xenia I. tab. 48. II. 56.

246. EPIDENDRUM CUCULLATUM Lindl. in Bot. Reg. 1838. Misc. 47. Huc: Lindl. l. c. 193.:

E. caule compresso folioso, foliis lanceolatis acutis, pedunculo squamato paucifloro foliis multo breviore, rachi brevi flexuosa, sepalis petalisque erectis ovato-lanceolatis acutis, labello obovato acuto: linea media tuberculisque duobus basilaribus callosis, anthera longe infra apicem clinandrii cucullati dentati truncati inserta.

Epidendrum biforatum Lindl. in Bot. Reg. 1844. Misc. p. 15. n. 2.

Wild in Brasil: Para — R. Harrison (v. v. c.). — One of the most unattractive of this large genus. The flowers are small and white, at the top of a leafy stem about nine inches high; the anther is remarkable for being inserted far below the apex of the column, in which respect the specis approaches the genus Physinga. The E. biforatum was founded upon a bad specimen of this.

247. EPIDENDRUM LAMPROCAULON H. G. Reichenbach in Bot. Zeitung 1852. 785. Huc: Lindl. l. c. 194.:

E. ramosum rigidum, ramulis paucifoliatis vaginis verruculis asperis, foliis anthesi adhuc persistentibus 1—3 oblongo-linearibus acutis, racemis tenuibus paucifloris flexuosis basi unisquamatis, squamis lineari-subulatis parvulis, bracteis angusto-lanceis pedicellis non aequatibus, sepalis oblongo-linearibus acutis, petalis duplo angustioribus, labelli lamina obtuse trilobula minute denticulata callis 2 erectis in basi.

Wild in Mexico; near Oaxaca — Galeotti 5265 (Rchb.). — There exist in Sir W. Hooker's herbarium two specimens from Galeotti, numbered 5072, which agree with this in all respects except the leafsheaths, which are not verrucose. They are marked „Arborescent, on oaks near Oaxaca at 7500 feet, flowers greenish, May."

— Rchb. fil. l. c.:

Ramosum, rigidum, ramulis paucifoliatis, vaginis verruculis asperis, foliis anthesi adhuc persistentibus 1—3, oblongo-linearibus acutis, racemis tenuibus paucifloris flexuosis basi unisquamatis, squamis lineari-subulatis, parvulis, bracteis angusto-lanceis pedicellos non aequantibus, perigonii phyllis oblongo-linearibus acutis, lateralibus internis duplo angustioribus, gynostemio semitereti clavato; androclinii limbo postice exciso, antice utrinque producto retuso repandulo, labelli lamina obtuse trilobula, minute denticulata, dentibus 2 erectis in basi.

Oaxaca. Galeotti 5265.

248. EPIDENDRUM ANTENNIFERUM Lindl. in Paxton's Flower Garden vol. I.; gleanings 234 ic. 113. Huc: Lindl. l. c. 195.:

E. foliis coriaceis oblongis acutis, pedunculo gracillimo apice subpaniculato, petalis longissimis filiformibus, labello ovato leviter dentato basi trituberculato.

Wild in Mexico; Xalapa Henchmann (v. s. c.). — In many other Amphiglottis, there is a similar tendency to lengthen the petals, but in no other does it occur in the same degree as here. It is to be observed that the lengthening is an after-growth, the petals beinp straight and short before the flowers expand.

249. EPIDENDRUM SKINNERI Bateman in Bot. Reg. t. 1881. Hooker in Bot. Mag. t. 3951. Huc: Lindl. l. c. 196.:

E. foliis distichis lanceolatis acuminatis, caule apice longe aphyllo squamoso, racemo cylindraceo multifloro, bracteis membranaceis setaceis pedicellis aequalibus, floribus cernuis, sepalis lineari-lanceolatis, petalis ovalibus acutis, labello ovato acuminato integerrimo per medium trinervi basi obsolete 2-calloso.

Epidendrum Fuchsii Regel in Schweiz. Zeitschr. für Gartenb. 1854. p. 262.

Wild in Guatemala; on trees in cool climate — Skinner (v. v. c.). — One of the most beautiful of its race. Flowers large, deep rose-colour, in long racemes. It is difficult to cultivate. Mr. Skinner says that it inhabits a middling temperature, and will thrive best in a climate graduated from 56° to 70°. He directs us not to put it in earth, but to permit it to have free scope for the young roots and shoots, which it, when wild, throws out in August. E. Fuchsii is certainly a starved state of this common and well-known plant.

Epidendrum Fuchsii Regel. Rchb. fil. in v. Mohl et v. Schlechtdl. B. Z. 1842. 672. Nach einer erhaltenen Originalabbildung nichts als Epidendrum Skinneri Lindl., zwar eine alte Gartenpflanze, aber kein Euepidendrum, sondern ein Amphiglottium.

250. EPIDENDRUM COSTATUM Richard and Galeotti Orch. Mex. 22. Huc: Lindl. l. c. 197.:

E. caule compresso crasso vaginis maculatis, apice folioso, foliis oblongis subundulatis acutis panicula cernua bispathacea brevioribus, bracteis spathaceis costatis pedicellis brevioribus, sepalis lanceolatis apice involutis, petalis angustioribus incurvis, labello transverso rotundato dentato emarginato basi bicalloso venis radiantibus, clinandrio integro.

Wild in Mexico — Galeotti Loddiges (v. v. c.). — Flowers rich crimson, as large as in E. nutans.

251. EPIDENDRUM FILICAULE LO. n. 23. Huc: Lindl. l. c. 198.:

E. caule gracili ramosissimo, foliis linearibus acutis, sepalis cuneato oblongis petalisque filiformibus patentibus, labello subrotundo cordato retuso repando, spicis terminalibus 3-floris, rachi capillari bracteis spathaceis paucis membranaceis.

Wild in Brazil — Prescott; branches of trees, Pedra Bonita Tejuca — Gardner 242 (v. s. sp.). — A branched reed-like plant. Flowers small, in little three-to-four-flowered racemes, half hidden among the grassy leaves.

252. EPIDENDRUM SELLOWII H. G. Reichenbach in Linnaea XXII. p. 839. Huc: Lindl. l. c. 199.:

E. pedunculo brevi squamato, squamis vaginantibus subacutis, bracteis subaequalibus, ovariis pedicellatis longioribus, florum (3) sepalis oblongis acutis, petalis angustioribus, labello cordato acuto basi bicarinato.

Wild in Brazil — Sellow. (Rchb.). — „Stems erect, leafy. Leaves longish, rounded at the point."

253. EPIDENDRUM GALEOTTIANUM Richard and Galeotti, Orch. Mex. p. 21. Huc: Lindl. l. c. 200.:

„E. caule simplici, foliis ellipticis obtusis carnosis, racemo simplici terminali, floribus parvulis purpureis, labello adnato cordiformi subobtuso.

Wild in Mexico — Galeotti.

254. EPIDENDRUM HEMISCLERIA Rchb. fil. Huc: *Hemiscleria* Lindl. Folia I. fasc. 4.:

Sepala erecta, coriacea, concava, aequalia. Petala conformia, membranacea. Labellum dependens, concavum, lineare, sessile, coriaceum, sepalis longius, basi c. columna continuum; lineis 3 rectis elevatis. Columna nana, semiteres, basi juxta labellum utrinque auriculatum; clinandrium membrana marginatum. Stigma fovea circularis. Pollinia 4, ovalia, aequalia; caudiculis 2 pulvereis replicatis in unam connatis; glandula 0. Anthera 4-locularis, carnosa, loculis membranaceo-marginatis.

Herba epiphyta Americae tropicae, caulescens. Folia coriacea, disticha. Corymbus terminalis, pedunculatus. Flores coriacei, semiclausi.

A singular plant, wih quite the habit of an Amphiglottian Epidendrum. From that genus it differs in its lateral sepals being shorter, than the lip and in no degree oblique; in the latter gradually passing into the column; and especially in the presence of a pair of small round auricles, standing at the base of the column, at the place where the lip joins on. I think, there can be no doubt that these processes belong to the column and not to the lip, because they hold firmly to the column, when the lip is pulled off, and have evidently a vascular connection with the former. It may be added, that the lip hangs down from the foot of the column, instead of being parallel with it, as in Epidendrum.

1. HEMISCLERIA NUTANS. — Wild in Peru; Chachapoyas — Mathews (v. sp. in hb. Miers). — The single specimen of this rare plant, preserved in Mr. Miers' herbarium, has no number, and consists of a hard stem about six inches long, closely covered with coriaceous distichous obtuse leaves. The peduncle is scarcely so long as the upper leaves, stands nearly horizontally, and has a pair of acute short scales at its base; below the middle there is a single joint, above which it thickens into a club-shaped rachis, closely covered with small globular coriaceous flowers, and stiff acute bracts, very much shorter, than the stiff pedicels. The sepals are roundish ovate, concave, very obtuse, and erect. The petals are thin, of the same figure, but flat and rather cordate. The lip is linear, channelled, two-lobed, very coriaceous, at the base where it joins the column, and there furnished with three stout ribs, of which the central is much the largest. The auricles of the column are nearly round, and petaloid.

C. *SCHISTOCHILA INTEGRA.*

255. EPIDENDRUM PATENS Swartz Fl. Ind. Occ. I. 1495. Bot. Cab. t. 1537. LO. n. 60. Bot. Mag. t. 3800. Paxton's Flower Garden; gleanings 394 Ic. 198. Huc: Lindl. l. c. 235.

E. foliis oblongo-lanceolatis, racemo longo laxo pendulo, sepalis petalisque subaequalibus oblongis acutis concavis patentibus, labelli quadrilobi lobis lateralibus subrotundis anterioribus linearibus obtusis conniventibus, callis 2 minutis lineaque elevata.

Wild in Jamaica, on the mountains — Swartz; Guatemala — Skinner (v. v. c.). — Stem about a foot high, clothed with oblong coriaceous distichous leaves. The raceme is about nine inches long, and pendulous, bearing thirteen or fourteen flowers, of a pale rusty yellow colour, and about an inch and a half across. Sepals thicker in texture than the petals, keeled on the outside, and somewhat darker. Lip thin, roundish, four-lobed, with a slight central elevated line, and a pair of thin tubercles at its base; the lateral lobes rounded, somewhat hatchet-shaped, very much larger than the two in front, which are divergent.

256. EPIDENDRUM FRUTICOSUM LO. 22. Huc Lindl. l. c. 202.:

E. foliis distichis ovato-oblongis acutis, caule ramoso fruticoso, racemo terminali nutante, sepalis cartilagineis petalisque membranaceis ovato-lanceolatis acutis erectis, labello subrotundo cordato retuso apiculato undulato callis 5 magnis confluentibus in disco.

Wild in Mexico — Pavon (v. olim s. sp. in hb. Lamb.). — Stem branching, without a trace of sheaths, as thick as a crowquill. Bracts linear-lanceolate, about as long as the ovary.

257. EPIDENDRUM GLADIATUM LO. 47. Huc Lindl. l. c. 203.:

E. „foliis distichis gladiiformibus, racemis terminalibus fasciculatis corymbosis recurvis, sepalis oblongis obtusis margine reflexis petalisque spatulatis patulis, labelli trilobi lobis lateralibus subquadratis rotundatis intermedio multo minore obcordato basi bituberculato".

Wild in Peru — Pavon (v. s. sp. olim in hb. Lambert). — „Steem a foot high, apparently

simple, naked at the base, hard, as thick a goose-quill, leafy towards the upper end, and curved. Racemes short, proceeding from several sheaths. Sepals four lines long, three lines broad". It is more than twenty-two years since I saw this plant, which I have since thought identical with a Mexican plant, now referred to E. anisatum. The original specimen requires to be re-examined.

258. EPIDENDRUM ANISATUM La Llave p. 27; LO. n. 62. Huc Lindl. l. c. 294.

E. caulibus brevibus erectis, foliis ovato-lanceolatis carnosis obtusis racemis longioribus, bracteis membranaceis ovatis, sepalis oblongis petalisque lineari-cuneatis obtusis, labelli lobis lateralibus rotundatis intermedio emarginato basi bicalloso.

Epidendrum gladiatum Lindl. in Benth. Plant. Hartweg p. 72.

Wild in Mexico; on trees near Valladolid, June — La Llave; Rancho del Ojo de Agua, April — Hartweg (v. s. sp.). — This is very near E. gladiatum, with which I once confounded it; but it seems to be satisfactorily distinguished by its narrow fleshy leaves, short membranous blunt bracts etc. The flowers are described as being of a dingy colour, and emitting a smell of Anise at night. The lip is said to have three purple lines at the base.

259. EPIDENDRUM ORCHIDIFLORUM Salzmann LO. n. 29. Huc Lindl. l. c. 295.

E. foliis distichis coriaceis planis ovato-oblongis obtusis, caule apice nudo obtuse vaginato, racemo brevi terminali, floribus carnosis, sepalo supremo obovato lateralibus oblongis dimidiatis, petalis linearibus subcuneatis, labello subrotundo basi bicalloso apice tridentato: dente intermedio minore.

Wild in Brazil; Bahia, in sandy thickets — Salzmann; sandy bushy places near Macero, February — Gardner 1421; Berbice — Schomburgk (v. sp. sp.). — Leaves very fleshy and shining. Flower-stem a foot long, stout, clothed with blunt somewhat rough sheaths. Flowers green, as large as in the largest state of E. fuscatum.

260. EPIDENDRUM FUSCATUM Swartz Nov. Act. Ups. VI. 69. LO. n. 38. Bot. Reg. t. 67. Bot. Cab. t. 887. Bot. Mag. t. 2844. Huc Lindl. l. c. 206.:

E. foliis oblongis undulatis apice recurvis, scapi squamis acuminatis, sepalis oblongis, petalis linearibus, labello carnoso cordato trilobo laciniis rotundatis intermedia emarginata apice calloso basi 2-tuberculato, spica globosa recurva.

Epidendrum anceps Jacq. Amer. 224. t. 138.
Amphiglottis lurida Salisbury l. c.

(B) *virescens*. Flowers smaller and more green than usual.
Epidendrum virescens Lodd. Bot. Cab. t. 1867.
Epidendrum musciferum Lindl. in Hook. Journ. I. 6.

(C) *viridipurpureum*. Flowers much larger than usual, with a violet lip edged with yellow.
Epidendrum viridipurpureum Hook. in Bot. Mag. t. 3666.

Wild in the West Indies, and tropical America!; Jamaica — Swartz; Grenada — Loddiges; Panama — Cuming 1288; St. Vincents — Guilding; Dominica — Imray; Guayana — Schomburgk; Martinique — Jacquin (v. v. c. et s. sp.) — One of the most common plants in some of the tropical parts of America, varying greatly in the size of its flowers and the length of the flower-stem. Hence have arisen spurious species, proposed by myself and others, which a better acquaintance with them cancels. In colour, the flowers vary from dull greenish purple to green and almost yellow. E. viridipurpureum has unusually large flowers, and a flower-stem shorter than common. There is a little difference in the degree of lobing of the lip.

— Rchb. fil. in Bonpl. III. 68. Ocanna. 3000'. April. Wagener.

Epidendrum (Amphigl.) *amphistomum* A. Rich. in Ram. Sagra. Tb. 81.

Caule erecto simplici, folioso, compresso ancipiti, bipedali, glabro; foliis alternis vaginantibus, (vagina ancipiti persistente nervosa) ellip-

tico oblongis coriaceis obtusis, 5—7 uncias longis, 10—15 lin. latis, subtus carinatis, floribus parvulis virescentibus pedunculatis, racemos simplices unciales, saepius geminos e parte caulis superiore enatos, bracteis ovali acuminatis, lata basi insertis persistentibus; sepalis externis oblongis subspathulatis, nervosis lateralibus subobliquis, concavis; int. (petalis) oblongo-linearibus acutis, membranaceis, enerviis, basi longe unguiculatis, sepalis aequilongis, labello parvulo cum lateribus gynostemii coalito et hic inflato subsaccato, in parte libera trilobo lobis lateralibus oblongo subquadratis, truncato obtusis, terminali transverso latiore quam longo subquadrato, medio incrassato et plicato; gynostemio abrupte incurvo, antice alato, alis cum ungue labellis*) coalitis.

Cuba.

Obs. Huc forsan inserenda Lemaireana species: *Epidendrum* (Amphigl.) *calliferum* Lem. Jard. Fleur. IV. 65.

Caule elato subancipiti tripedali, foliis distichis lineari oblongis mucronulatis basi vaginantibus, coriaceis; racemo terminali pedali candelabriformi pendulo; floribus carnosis longe pedicellatis magnis flavescentibus purpureo punctatis, sepalis petalisque oblongis aequalibus, iis angustioribus; omnibus apice callo rotundo donatis; labelli partis liberae lobis basilaribus auriculiformi laceratis supra bicallosis, terminali ungue tricarinato, lobulis oblongo laceris divaricatis.

Grandes Antilles.

Obs. Forsan haec nova species est antiquum Epidendrum raniferum?

261. EPIDENDRUM OVALIFOLIUM LO. n. 39. Huc Lindl. l. c. 207.:

E. foliis distichis ovali-lanceolatis acutis, sepalis oblongo-lanceolatis, petalis linearibus, labelli trilobi cordati lobis lateralibus rotundatis, intermedio lineari bilobo disco 3-carinato basi bituberculato, racemo elongato.

Wild in Mexico — Pavon (v. s. sp. olim in hb. Lambert). — Very near E. fuscatum, from which it chiefly differs in the lateral lobes of the lip being mucronate, the intermediate linear and two-lobed, and the racemes long. It requires re-examination. What bears the name in gardens is usually a starved state of E. paniculatum.

262. EPIDENDRUM SMARAGDINUM Lindl. in Bot. Reg. 1838. misc. 44. Huc Lindl. l. c. 208.:

E. caule gracili ad fastigium ipsum folioso, foliis lineari-lanceolatis acuminatis subdistichis, spica terminali pauciflora rigida nutante foliis breviore, bracteis acuminatis squarrosis ovario ventricoso cuniculato brevioribus, sepalis lineari-oblongis acutissimis, petalis angustissimis acuminatis, labello cuneato cordato carnoso apice tridentato basi bicalloso: laciniis aequilongis, lateralibus rotundato-truncatis intermedia acuta decurva.

Wild in Demerara — Loddiges; Brazil, Organ Mountains — Miers (v. v. c. et s. sp. in hb. Miers.) — Allied to E. cucullatum, with small bright green flowers, hardly distinguishable from the leaves.

263. EPIDENDRUM CAMPESTRE Lindl. in Bot. Reg. 1844. misc. p. 17. Huc Lindl. l. c. 209.:

E. foliis distichis lineari-lanceolatis canaliculatis coriaceis, caule basi pseudobulboso, pedunculi elongati squamis distantibus appressis, racemo cylindraceo, sepalis lateralibus falcatis labello duplo brevioribus, petalis conformibus angustioribus, labello subrotundo obsolete 4-lobo margine integerrimo, callis 2 linearibus confluentibus linea elevata flexuosa interjecta, clinandrio 4-lobo laciniis quadratis.

*) Sic!

Wild in Brazil; in dry upland Campos, Serro do Frio, Diamond District — Gardner 5207 (v. s. sp.) — Somewhat related to E. orchidiflorum. Remarkable for its short falcate lateral sepals and round lip, without any sort of fringing, and for the enlarged pseudobulbous condition of its stems at the base, in which they approach E. brachycladium.

263. EPIDENDRUM LIMA. Huc Lindl. l. c. 210.:

E. caule ramoso folioso, foliis ovato-lanceolatis acutis vaginis scabris, racemis subsessilibus corymbosis, bracteis linearibus acuminatis herbaceis pedicellis aequalibus, sepalis lanceolatis margine revolutis, lateralibus obliquis carinatis basi columnae manifeste adnatis, petalis lineari-spathulatis 3-veniis, labelli lobis lateralibus rotundatis intermedio cuneato minoribus, callis 2 conspicuis lineaque elevata interjecta, clinandrio cucullato carnoso.

Wild in Peru; in the ravines of Pichincha — Jamieson 111 (v. s. sp. in hb. Hooker). — In habit this agrees with E. corymbosum, from which its scabrous sheaths, larger flowers, and widely different lip, distinguish it. The lateral sepals are an inch long, and very distinctly united to be the base of the column. The capsule is oblong, three-cornered, with broad rather thin-edged ribs at the angles.

264. EPIDENDRUM VANDIFOLIUM Lindl. in Journ. of Hort. Soc. IV. p. 269. Huc Lindl. l. c. 269.:

E. foliis longis angustis distichis recurvis basi canaliculatis, racemo brevi cernuo subsessili, labelli tripartiti lobis lateralibus semicircularibus, intermedio lineari retuso lineis tribus parallelis lucidis elevatis callisque 2 elongatis intra basim.

Wild in Mexico — Loddiges (v. v. c.). — Introduced by Messrs. Loddiges, from whom I received it in April 1849. It is nearly related to E. fuscatum, but its leaves are long, narrow, distichous, and recurved like those of some Vanda. The flowers are sweet-scented, dull purple, somewhat freckled.

265. EPIDENDRUM WEDDELII. Huc Lindl. l. c. 212.:

E. caule simplici, foliis paucis ovalibus obtusis sursum angustioribus, pedunculo elongato gracili apice paucifloro, petalis filiformibus, labelli lobis lateralibus rotundatis intermedio cuneato fisso brevioribus.

Wild in Brazil; Serra d'ouro branco, Minas Gerães, Dec. 1843 — Weddell (v. ic. pict. in hb. Mus. Par.) — I have only seen a sketch of this among Mr. Weddel's Brazilian drawings. It represents a slender plant about a foot high, with four leaves towards the root. The flowers are rose-coloured, like those of E. elongatum, and twice as large.

266. EPIDENDRUM WARSZEWICZII H. G. Reichenb. in Bot. Zeit. 1852. p. 736. Huc Lindl. l. c. 213.:

E. caule calamum anatinum crasso paucifolio (5—6), foliis in caule florido duobus summis tantum adhuc vigentibus lineari-ligulatis apice bilobis, pedunculo reflexo plurifloro basi bisquamato, squamis apice lanceis glumaceis vix pollicaribus pedicellis brevioribus seu aequalibus, ovario sub apice strumoso canaliculato, sepalis petalisque oblongis acutis, labello lato-cuneato antice dilatato minute denticulato trilobulo, callis 2 erectis in basi lineis tribus elevatis antrorsum procurrentibus.

Wild in Costa Rica and Veragua — Warczewitz (Rchb.) — Rchb. fil. Xenia I. Pl. 26. p. 67.

267. EPIDENDRUM PARANTHICUM H. G. Reichenb. in Bot. Zeit. 1852. p. 736. Huc Lindl. l. c. 214.:

E. tenue pusillum rhizomate tenuissimo, caulibus assurgentibus teretiusculis, foliorum vaginis arpophyllaceis laminis carnosulis trigono-

teretiusculis obtusis, pedunculo ancipiti paucifloro, bracteis triangulis amplexicaulibus ovaria pedicellata non aequantibus, sepalis petalisque lanceolatis acutis, columna ultra basin labelli producta, (labello?) trilobo lobis lateralibus oblongis antice et postice rotundatis medio lineari acuto (omnino Hormidii more).

Wild in Guatemala — Warczewitz. — Flowers as small as in Stelis parvilabris. Leaves scarcely half an inch long. Stem as much as five inches high. — Rchb. I presume that the word labello is accidentally omitted by Mr. Reichenbach in his printed definition above quoted.

268. EPIDENDRUM CENTROPETALUM *) H. G. Reichenb. in Bot. Zeit. 1852. p. 736. Huc Lindl. l. c. 215.:

E. caule stricto calamum passerinum crasso densius foliato, foliorum vaginis arctissimis violaceo-verrucosis, foliis lineari-oblongis sensim acutis, pedunculo abbreviato basi unisquamato paucifloro, bracteis linearibus acutis ovaria pedicellata longe non aequantibus, sepalis cuneato-lanceolatis acutis, petalis duplo augustioribus magis cuneatis, labelli trilobi lobis lateralibus basilaribus anguste triangulis apice cuneatis medio cuneato alte bilobo lobis oblongis obtusis cum denticulo in sinu, callo bilobo cum denticulo medio corneo in basi, clinandrio cucullato longe producto integro crenulato.

Wild in Veragua; on the volcano Chiriqui Warczewitz. — Caudicles three times as long as the pollen-masses. — Rchb.

Huc: *Oerstedella* Rchb. fil. in v. Mohl et v. Schlechtdl. Bot. Zeit. 1852. p. 932.

Perigonium membranaceum, phylla lanceolata acuta, lateralia interna angusta angustiora. Labelli unguis marginibus suis cum gynostemii petaloidei margine connatus, lamina triloba. Gynostemium omnino petaloideum, in cucullum-membranaceum ligulatum ascendentem productum; anthera in puncto prominulo cuculli postice inserta (Coelogynis more), antice bicuspis; quadrilocularis; pollinia quaterna (caudiculae valde elongatae in O. centropetala inserta, quam in O. centradenia non vidi), rostellum nullum!! limbus stigmatis inferior: lineae oblique descendentes sub fovea stigmatis sub figura trianguli.

Oerstedella centropetala:

Labello trilobo, lobis lateralibus triangulis, lobo medio sessili divaricato-bilobo, sinu inter utrumque lobum oblongum obtusum triangulum; lamella unguis adnata obtusa biloba cum denticulo superposito.

Epidendrum centropetalum Rchb. fil. Bot. Zeit. 1852. p. 732.

Ein Exemplar mit 2 Blüthen. Chiriqui. V. Warscewicz.

Huc: *Oerstedella centradenia:*

Labello trilobo, lobis lateralibus lineari-falcatis, lobo medio a basi ligulata subito expanso in laminam obreniformem cum apiculo in sinu antico; lamella angusta flava apice triloba lateribus suis secreta in ungue cum gynostemii marginibus connati.

Ueber Fuss hoch. Blätter zweizeilig, spitzlineal, kurz; Scheiden nervig, blaugrüne Höckerchen auf den Nerven. Aehre mit zwei Zweigen. Deckblätter spitzlanzettlich, viel kürzer, als die langestielten Fruchtknoten. Blüthen rosa, so gross, wie bei Epidendrum elongatum. Irasu in Centralamerika. 7000'. Ein Exemplar. Oersted. — Cf. Xenia Orchid. tab. 17. pag. 39. 40.

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*) „As this sheet was going to press, the B. Z. of Dec 31, 1852, reached me, in which Mr. Reichenbach raises this to the rank of a genus, called Oerstedella, joining with it a second species. The genus is described as having a petaloid, though adnate column etc. Lindl."

D. SCHISTOCHILA CARINATA.

269. EPIDENDRUM SPICATUM Hook. fil. in Linn. Trans. XX. 180. Huc Lindl. l. c. 216.:

E. caule simplici flexuoso, foliis lanceolatis acutis laxe vaginatis, spica densa ovali squamis 2 membranaceis suffulta foliis multo breviore, bracteis lineari-oblongis carinatis ovario aequalibus, sepalis ovalibus acutissimis lateralibus sub apice alte carinatis, petalis linearibus acutissimis, labelli subrotundi lobis lateralibus cordatis rotundatis antice denticulatis sublaceris intermedio retuso majoribus, callis 2 minutis lineaque interjecta obsoleta.

Wild in the Galapagos; Chatam Island — Capt. Wood; James Island — Darwin (v. s. sp. in hb. Hooker). — This has no very obvious affinity to any other species. Its loose leaf-sheaths and simple oval spike are very peculiar.

270. EPIDENDRUM ATTENUATUM. Huc Lindl. l. c. 217.:

E. foliis carnosis ovato-oblongis obtusis, pedunculo aphyllo, bracteis linearibus acuminatis pedicellis multo longioribus, sepalis petalisque linearibus acuminatis, labelli lobis lateralibus semiovatis laceris, intermedio lineari-lanceolato subdentato multo brevioribus, callis 4 linea longa elevata interjecta, clinandrio obsolete denticulato.

Wild in New Grenada — Lobb. (v. s. sp. in hb. Hooker). — A plant quite unlike all others, with flowers resembling those of E. ciliatum in miniature.

271. EPIDENDRUM CINNABARINUM Salzmann LO. 106. Bot. Reg. 1842. t. 25. Huc Lindl. l. c. 218.:

E. foliis oblongis apice sub-recurvis, sepalis petalisque lanceolatis subaequalibus, labello trilobo carinato basi bicalloso laciniis lateralibus inciso-laceris intermedia basi obcuneata sub apice constricta apice cuneata truncata angulis acuminatis simplicibus fissisque.

Wild in Brazil; sandy thickets near Bahia — Salzmann; Glocker 38; Pernambuco. in similar places — Gardner 1163; Venezuela, Merida — Sonder in hb. Hooker (v. v. c. et s. sp.). — Three species, each of great beauty, are very nearly related. They all have bright scarlet or crimson flowers, a pair of tubercles at the base of the labellum, and a ridged line running from between the tubercles to nearly the apex of the lip. They however differ thus: E. radicans has the lateral lobes of the labellum rounded and toothletted only, not lacerated, and it produces coarse pale green roots from its stems; E. cinnabarinum has the lateral lobes of the labellum deeply lacerated, while the central lobe is contracted in the middle, and then suddenly wedge shaped, with its angles prolonged into one or two fine teeth; E. Schomburgkii has the lateral lobes only toothed, with the centre lobe gradually widened to the point, and there toothletted, without being at all truncate.

272. EPIDENDRUM SCHOMBURGKII Lindl. in Bot. Reg. 1838. Misc. n. 16. t. 53. Huc Lindl. l. c. 219.:

E. foliis oblongis obtusis carnosis, caule simplici apice aphyllo, sepalis petalisque lineari-lanceolatis acutis aequalibus patentissimis, labelli trilobi alte carinati basi bicallosi lobis lateralibus semiovatis latis rotundatis postice laceris: intermedio cuneato apice triangulari crispo denticulato et utrinque undulato.

Epidendrum fulgens Focke Tijdschrift nederl. IV. 66.

(β) confusum. Lobes of the lip almost blended in one circular deeply fringed body.

Epidendrum fulgens Ad. Brongn. Voy. Duperrey t. 43.

Wild in Demerara — Schomburgk, 834, 581; Surinam, on the trees bordering the Commewyne river — Focke 57, 1057; Brazil, Pernambuco, on trees — Gardner, 1162; St. Catharine's — Lesson; Peru, Andes of Quito — Jamieson in hb. Hooker (v. v. c. et s. sp.). — Flowers rich scarlet, very handsome. Leaves sometimes bordered with

crimson. The variety B, with all the lobes of the lip nearly run together into one circular plate, a little toothed at the edge, and more so at the point, seems to be a very common state. There is no doubt that the form of the lip varies greatly.

Huc: *Epidendrum fulgens* Focke in Tidschr. Natuurk. Wetensch. IV. p. 66.:

Foliis oblongis ellipticisve apiculatis rigidis, caule folioso apice et inferne aphyllò vaginato, sepalis petalisque lanceolatis acuminatis aequalibus, labelli trilobi lobis lateralibus dimidiatis laceratis patentibus, intermedio cuneato apiculato, utroque apicis margine lacerato involuto, basi bicalloso, disco cristato.

Radices fibrosae; primariae crassiusculae albidae. Caulis inferne teres, aphyllus, vaginatus; superne subcompressus, foliosus, erectus, 2—3-pedalis crassitie pennae anserinae. Folia alterna, vaginata, oblonga vel elliptica, recurvo-apiculata, crassiuscula, subcarnosa v. coriacea, rigida, oblique patentia, nitida, laete viridia, 8—15 centim. longa, 2—3 lata. Pedunculus terminalis apice subcorymbosus aphyllus, articulatus, vaginatus, 5—7-florus. Vaginae arctae, longiores, totum fere articulum amplectentes, purpurascentes; superiores minores angustatae acutae. Flores speciosi, coccinei. Sepala et petala aequalia lanceolata, acuminata; sepala retrorsum flexa, paullo latiora concaviuscula. Labellum cum columna connatum, limbo 3-partito, disco crista lineari lutea ultra medium lobi intermedii porrecta instructo utrinque ad basin calloso, callis luteis apice subulatis, basi rotundatis; lobis lateralibus dimidiatis laceratis patentibus, intermedio lato-lineari vel cuneato apiculato, utroque apicis dilatati margine lacerato involuto. Columna erecta cum ovario continua, marginibus luteis in labellum juxta cristam in callo decurrentibus. Anthera globosa bilocularis, loculis septo divisis. Pollinia 4 geminata, cultriformia, compressa, per paria caudiculis duabus elasticis pulvereis replicatis affixa. Ovarium et pedicellus concolor. — Epiphyta in arboribus sylvarum secus flumen Commewyne superioris. — Florebat Martio et Decembri. — Ab E. crassifolio Lindl. haud ita longe distare videtur, sed iconem Loddigesianam in Op. Lindl. p. 107 citatam, mihi videre non contigit.

273. EPIDENDRUM RADICANS Pavon. MSS. LO. 35. Huc Lindl. l. c. 220.:

E. foliis carnosis subcordatis ovatis-obtusis, caule simplici longe aphyllo vaginato, sepalis petalisque lanceolatis acutis patentibus, labelli carinati basi bicallosi lobis lateralibus rotundatis denticulatis, intermedio cuneato apice fimbriato emarginato utrinque integro.

Epidendrum rhizophorum Bateman in Bot. Reg. 1838. Misc. 10.

Wild in Guatemala — Skinner; Mexico — Hartweg 567; in grass at Tomatze, near Comaltepeque — Id. (v. v. c. et s. sp.). — One of the finest of its race, with dark orange-red flowers, as much as an inch and a half across. It always has long white roots proceeding from the sides of the stem. The plant thus named in Pavon's handwriting in the Fieldingian herbarium is Dinema polybulbon.

274. EPIDENDRUM CALANTHUM Rchb. fil. et Warscew. in Bonpl. II. 110.

Aff. E. radicanti et decipienti, superne arrhizum, labelli lobo medio sessili obcordato, omnino denticulato, carinula hinc flexuosa a basi in discum, disco (sicco) velutino.

Summitates tantum adsunt. Pedunculus bene lignosus. Vaginae arctae, ostio fissae acutae haud valde productae. Racemi laterales inflorescentiam terminalem haud aequantes. Bracteae triangulares seu lanceae ovariis quater breviores. Sepala ac tepala membranacea oblonga acuta; labellum trilobum; lobi laterales flabellati, margine externo fimbriato denticulati, margine postico et antico integerrimi, lobus medius obcordatus, antice emarginatura triangula excisus, sinu integerrimo parvo a lobis lateralibus distinctus, marginibus fimbriato dentatis, calli 2 parvi trianguli in ima basi, linea carinata hinc flexuosa a basi in discum velutinum, androclinium vertice triangulum, utrinque falcatum. — Blüthen so klein, wie die des E. ellipticum Grah. Peru. v. Warscewicz.

275. EPIDENDRUM DECIPIENS. Huc Lindl. l. c. 221.:

E. foliis oblongis obtusis carnosis, caule simplici apice aphyllo, sepalis petalisque lanceolatis aequalibus patentissimis, labelli trilobi carinati basi bicallosi semicircularis lobis aequalibus inaequaliter dentatis intermedio cuneato lateralibus antice rectis postice rotundatis, clinandrio cucullato denticulato.

Wild in New Grenada; in the province of Ocanna — Schlim, 1082; Demerara, on the Conocon mountains — Schomburgk (v. s. sp.). — This is nearest E. Schomburgkii; from which it is distinguished by its equally divided lip, smaller flowers, and the inconsiderable keel of the lip. The flowers are vermilion according to Schomburgk, orange according to Schlim.

Epidendrum decipiens Lindl. Rchb. fil. Bonpl. III. 68. Wagener.

— Rchb. fil. in Bonpl. II. 282. Ocanna. 4000'. „Environs de Bruxelles." September. n. 92. Schlim.

276. EPIDENDRUM PAYTENSE (Schistochila carinata) Rchb. fil. in Bonpl. III. 220.

Aff. Epidendro decipienti Lind. sepalis lanceis, tepalis cuneato rhombeis, superne denticulatis, labelli laciniis lateralibus semirotundis antice acutis serratis, lacinia media cuneata apice biloba lobis incumbentibus antice serratis.

Caulis rotundulus. Folia oblonga supra basin paulo rotundata, margine anguste cartilagineo denticulato cincta, bi — quinquepollicaria, supra basin nunc unum lata. Pedunculus teres vaginis nonnullis arctis subdistantibus vestitis. Racemi rhachis incrassata. Bracteae lanceae seu triangulae erectae. Ovarium basi attenuatum plus quam semipollicare. Sepala lancea cinnabarina. Tepala spathulata, apice acuta, margine externo serrulato; lacinia media cuneata integerrima, apice biloba, lobi semiovati, superposite denticulati, calli duo angusti rotundati in basi, carina interposita a basi per discum. Flos cinabarinus illo E. cinnabarini duplo minor, labellum luteum punctis atropurpureis paucis in disco. Gynostemii anguli laterales utrinque angulati. La Payta de Peru v. Warscewicz. — Eingeführt von Herrn Fabrikbesitzer Nauen in Berlin, cultivirt von Herrn Gireoud. (Vgl. Allg. Gtz. 55.)

277. EPIDENDRUM IMATOPHYLLUM LO. n. 52. Huc Lindl. l. c. 222.:

E. foliis distichis ligulatis obtusis subemarginatis, caule simplici apice aphyllo vaginato, sepalis lineari-lanceolatis patentibus lateralibus falcatis, petalis duplo latioribus nanis laciniatis, intermedio cuneato-rotundo subundulato basi serrato.

? *Epidendrum flexuosum* Meyer Fl. Essequeb. p. 260. LO. n. 34. Focke Tijdschrift nederl. IV. 65.

Wild in Demerara — Schomburgk 426; Parker; Surinam — Kappler 1656; Hostmann 405; Brazil, mouth Rio Negro, on trees — Spruce 1660 (v. v. c. et s. sp.) — Flowers pale rose-colour, larger than in E. ellipticum. Leaves very long, strap-shaped. The column is sometimes green, and the same colour occurs to a small extent in the sepals. E. flexuosum is referred hither in hb. Hooker — and perhaps with justice. N. 122 of the Herb. Mus. Par., collected in French Guiana by Mélinon, consists of leaves of this, and flowers of E. Schomburgkii.

Huc: *Epidendrum flexuosum* G. F. W. Meyer Fl. Esseq. p. 260. Lindl. l. c. p. 103. in Tijdsch. Natuurk. Wetensch. IV. 65. — Cl. Meyeri descriptioni haec sunt addenda: Spica umbellata terminalis 9—12-flora. Sepala recurva, lateralia falcata. Labelli discus 2 costis brevibus compressis elevatis divaricatis albis instructus. Anthera 4-locularis. Pollinia dimidiato-ovata, hinc rotundata, compressa. Clinandrium marginatum, 3-dentatum, dentibus obtusis. Capsula oblonga trisulcata. — Mense Septembri florens ad rivum Tampati, fluminis Commewyni superioris tributarium, ad arboris truncum.

E. *SCHISTOCHILA TUBERCULATA.*

278. EPIDENDRUM DICHOTOMUM Presl. Rel. Haenk. 101. LO. n. 58. Huc Lindl. l. c. 223.:

E. foliis lanceolato-oblongis obtusis, caule apice aphyllo squamoso ramoso, sepalis petalisque lanceolatis acutis reflexis, labelli laciniis fimbriatis lateralibus rotundatis patentissimis intermedia majore obcordata, callo altero concavo crenulato indiviso duobusque minoribus ad basin, clinandrio integerrimo.

Wild in Peru — Mathews 1024; near Huanaco — Haenke (v. s. sp.). — Very near E. ibaguense, but distinguished by its little lobed lip, and entire clinandrium. The unlobed tubercle, with a pair of smaller calli near its base, affords another mark of distinction.

279. EPIDENDRUM QUITENSIUM Rchb. fil. MSS. Huc: *Epidendrum fastigiatum* Lindl. l. c. 224.:

E. foliis ovato-oblongis obtusis carnosis, scapo aphyllo, racemo oblongo composito densissimo fastigiato, bracteis setaceis, sepalis petalisque oblongis obtusis aequalibus, labelli multifidi laciniati lobis lateralibus intermedio truncato minoribus, tuberculi 5-lobi elongati callo terminali 3-crenato lateralibus 2-crenatis, clinandrio integro.

Wild in Peru; on the Andes of Quito — Jamieson (v. s. sp. in hb. Hooker). — The large middle lobe of the lacerated lip, and its very peculiar long tubercle, render it easy to recognise this, independently of the dense fastigiate inflorescence. It is the size of E. Schomburgkii.

280. EPIDENDRUM BRACHYPHYLLUM. Huc Lindl. l. c. 225.

E. foliis ovato-oblongis carnosis, pedunculo 4-squamato racemo bis longiore, bracteis acuminatis pedicellis brevioribus, sepalis petalisque oblongis acutis subaequalibus, labelli lobis inaequalibus dentatis, lateralibus rotundatis intermedio cuneato emarginato apiculato ungue utrinque 2-dentato, tuberculi tripartiti lobis lateralibus decurrentibus intermedio ovato 5-crenato, clinandrio serrato.

Wild in Bolivia; in the province of Yungas, Dec. — Weddell, 4255 (v. s. sp. comm. hb. Mus. Par.). — A sturdy plant, about six inches high, with the habit of E. elongatum. Flowers rose-coloured.

281. EPIDENDRUM SPINESCENS. Huc Lindl. l. c. 226 :

E. caule elongato apice dense folioso, foliis lineari-lanceolatis petiolatis rigidis apice spinescentibus, pedunculo sessili bracteis inferioribus acuminatis herbaceis, sepalis oblongis subaequalibus, labelli transversi lobis dentatis lateralibus rotundatis antice incisis intermedio apiculato minore, callo ovato elevato concavo medio utrinque tumido et in labellum decurrente, clinandrio serrulato.

Wild in Brazil — Miers 3484 (v. s. sp. in hb. Miers). — Stem nine inches high, at the upper end bearing five or six stalked taper-pointed leaves, an inch and a half to two inches long. Raceme sessile, two inches long. Flowers the size of E. ellipticum.

282. EPIDENDRUM GRACILICAULE Rchb. fil. et Warscew. in Bonpl. II. 111.

Aff. E. Lindenii floribus carnosulis triplo minoribus, labelli lobo medio transverso bilobo, lobis margine externo serratis, callo depresso hippocrepico crenato a basi lobi medii ad angulos gynostemii.

Summitates tantum adsunt. Pedunculus ultra pedalis, calamum columbinum vix crassus, nunc flexuosus, multisquamatus (squamae arctae, appressae), apice racemo 2—3 pollicari terminatus, nunc superadditis racemis lateralibus, bracteae triangulae, breves, ovaria bene sed haud conspicue cuniculata, flores carnosuli, sepala ac tepala subaequalia paulo angustiora oblonga acuta, labellum trilobum, lobi laterales a basi cuneata trianguli, seu ovati lacero dentati, lobus medius sinubus angustis sepa-

ratus, statim dilatatus, transversus, bilobus, lobi oblongi, margine externo pauciserrati, apiculus parvulus nunc in imo sinu antico: callus hippocrepicus crenulatus limbosus a basi lobi medii angulos versus gynostemii, androclinium trilobum, non serratum. — Die kleinen Blüthen von orangengelber Farbe sind kaum halb so gross, als wie die des E. ellipticum. Peru v. Warscewicz.

283. EPIDENDRUM LINDENII Lindl. in Bot. Reg. 1845. misc. 59. Huc Lindl. l. c. 227.:

E. caulibus simplicibus strictis, foliis carnosis ovalibus obtusis emarginatisve, racemo oblongo obtuso, sepalis lanceolatis petalisque aequalibus, labelli laciniis laceris lateralibus subrotundis, intermedia cuneata emarginata, callo 7-crenato crenis convexis integris inferioribus duplo majoribus, clinandrio denticulato.

Wild in Venezuela; rocks in the neighbourhood of Merida, at the height of 5000 feet — Linden 636; New Grenada, Santa Martha — Purdie; Caracas — Linden 64 (v. s. sp.). — This seems to be a common plant on the Spanish Main. Mr. Linden says there are three varieties; one with bright carmine flowers, another with rose-coloured, and a third with yellow-orange. The central tubercle is hemispherical, with seven lobes gradually diminishing in size up to the point. Mr. Linden's 636 is authority for this; what is said about the species in the Botanical Register, l. c., belongs, in part at least, to some other plant. Mr. Linden's 64 is rather smaller, the tubercles on the lip are slightly different, and the middle lobe of the lip is merely denticulate.

284. EPIDENDRUM COCHLIDIUM Lindl. in Ann. Nat. Hist. Vol. IV. 382. Huc Lindl. l. c. 228.

E. foliis ovato-oblongis obtusis emarginatisque coriaceis, sepalis petalisque lineari-lanceolatis patentibus aequalibus, labelli laciniis laceris subaequalibus intermedia cuneata truncata callo carnoso maximo excavato trilobo parum majore.

Wild in Peru — Mathews 1868; Venezuela Merida, in subalpine rocky places — Moritz 1601 (v. s. sp.) — Flowers yellow and red according to Moritz. The large tubercle, which covers the whole centre of the lip is very remarkable. It is said by Moritz to be called „Flor de San José" in Merida.

Huc: *Epidendrum pulcherrimum* Klotzsch in Allg. Gartenz. 1854. n. 30.

Caule tereti gracili folioso; foliis oblongo lanceolatis brevissime acutis; carnoso coriaceis distichis patentibus basi vaginatis; racemo congesto terminali; pedunculo sesquipedali vaginis elongatis bracteiformibus suffulto; floribus germinibusque sordide puniceis disco plicato cristato, labelli vitellino, bracteis persistentibus linearisubulatis membranaceis, perigonii foliolis oblongo obovatis acutis patentibus, basi attenuatis, exterioribus latioribus; labello trilobo, lobis lateralibus flabelliformibus inciso laceris, intermedio basi cuneato, apice dilatato divergenti bifido oblique truncato argute dentato, inter lacinias apiculato, disco 5 plicato appendicibus marginalibus 2 majoribus instructo germine glabro deorsum attenuato.

Peru. v. Warscewicz. col. C. Mathieu.

Epidendrum cochlidium Lindl. Rchb. fil. in Bonpl. II. 20. E. cochlidium und Lindenianum scheinen mir in einander überzugehen. Caracas. Wagener.

285. EPIDENDRUM CATILLUS Rchb. fil. et Warsc. in Bonpl. II. 112.

Aff. E. cochlidio Lindl., labelli callo a basi ad apicem lobi medii obovati apiculati integerrimi elliptico, crenulato, duplici, basilari in anteriorem incurrente, disco carinato.

Summitates tantum adsunt. Pedunculus nitidus, quasi calamaceus: terminalis crassus, more Polystachyarum quarumdam; pedunculi laterales elongati graciliores; bracteae lanceae acuminatae ovariis pedicellatis inferioribus triplo-quadruplo breviores, sepala oblonga acuta, tepala subaequalia acuta, labelli lobi laterales flabellati, postice latiores, margine externo rotundato dentati, antice et postice integerrimi;

lobus medius obovatus apiculatus integerrimus, cum callo connatus, vix productus, callus oblongus, margine pluricrenulatus, antice linea media carinatus, carina in apiculum excurrente, limbus crenulatus ante basin utrinque in discum incurrens: hinc quasi duo calli sibi imbricantes; androclinium serrulatum. — Blüthen etwas grösser, als bei E. decipiens Lindl. Neu-Granada: West-Cordilleren. v. Warscewicz.

286. EPIDENDRUM INCISUM Rchb. fil. et Warsc. in Bonpl. II. 112.

Aff. E. cochlidio labelli lobo medio rotundo, basi utrinque recto, callo oblongo crenulato apice in carinam acutam apicem labelli versus excurrente.

Summitates tantum adsunt. Pedunculus superne simplex seu ramosus. Flores sicci chartacei cinnabarini. Sepala ac tepala oblonga apiculata. Labellum circuitu rotundum: lobi laterales semicordati rotundati extus dentati, lobus medius basi utrinque rectus, ceterum rotundatus, apice sinu triangulo bilobus, lateribus inciso dentatus. Callus depressus marginatus crenulatus a basi gynostemii in basin lobi medii, antice in carinam sinum versus anticum productus; androclinii anguli infra rostellum paucidentati. — Das harte Gefüge der Blüthe und ihre Farbe zeichnen sie sehr aus. Grösse wie die des E. cochlidium Lindl. Peru. v. Warscewicz.

287. EPIDENDRUM XYTRIOPHORUM Rchb. fil. et Warsc. in Bonpl. II. 112.

Aff. E. cochlidio Lindl. perigonio membranaceo (in sicco), sepalis tepalisque lanceolatis, labelli lobo medio transverso non cuneato, carina acuta ultra callum excurrente.

Summitas tantum adest. Racemus multiflorus, cylindraceus 3—4 pollicaris. Bracteae triangulae apice subulatae ovariis pedicellatis septies et magis adhuc breviores. Perigonium in sicco membranaceum. Sepala ac tepala a cuneata basi lanceolata acuta. Labellum ambitu oblongum; lobi laterales quadrati, basi vix semicordati, latere externo paulo latiori inciso dentati; lobus medius aequilatus, sinu lineari divisus, transversus, sinu latissimo obsolete bilobus, lateribus rotundatis inciso dentatus; callus depressus oblongus lobulatus inter lobos laterales in basin lobi medii, antice medio carinatus, carina antice acuta ultra callum paulo progrediente; androclinii alae laterales denticulatae. — Blüthen wenig grösser, als die des E. Lindenii Lindl. Peru. v. Warscewicz.

— Rchb. fil. in Bonpl. III. 68. Ocanna. Wagener.

288. EPIDENDRUM (Amphiglottium Schistochila Tuberculata) FIMBRIA Lindl. et Rchb. fil. in Bonpl. II. 282.

Nulli affine, foliis ovali lanceis acutis minutis, pedunculo longissime squamato, labelli laciniis lateralibus semiovatis profunde laceris, lobo medio cuneato apice paucidentato, lamella media ligulata apice retusa crenata assurgente, callis 2 obtusis in basi, uno obtuse papulaeformi utrinque in basi loborum lateralium, androclinio serrulato

Planta elegans ultra pedalis. Folia in basi 7 sesquipollicaria, basi tertiae pollicis aequilata. Pedunculus prope per longitudinem pedis vaginis arctis tectus apice corymbosus. Flores illos Epidendri elliptici Grah. aequantes. Sepala ovata acuta. Tepala duplo angustiora. „Flores aurantiaci, labellum rubro maculatum." — Ocanna. 3500'. Savannen. October. 990. Schlim. — Eine durch die kleinen Blätter und die sehr zerissene Lippe höchst ausgezeichnete Pflanze.

289. EPIDENDRUM ANSIFERUM Rchb. fil. in Bonpl. II. 111.

Aff. E. elliptico, foliis lato ellipticis, labelli lobo medio transverso, subrotundo, callo trilobo antice crenulato utrinque ab angulis gynostemii divergenti carinato.

Caulis tripedalis. Folia lato elliptica, valde crassa, quatuor pollices longa, medio duos lata. Pedunculus longus, calamo anserino crassior, vaginae arctae, appressae, subcontiguae, punctulatae. Sepala ac tepala subaequalia oblonga cuneata apiculata,

lateralia dimidiata. Labellum circuitu circulare, lobi laterales semicordati, denticulati, sinubus parvis acute triangulis a lobo medio transverse aequilato antice rotundato bilobo separati, lateribus denticulato; callus depressus carnosus in basi anteriore loborum lateralium ac in radice lobi medii, antice minute crenulatus, superne hinc papulosus, carinis 2 ab angulis decurrentibus serrulatis gynostemii divaricatis inter lobos laterales et lobum medium. — Blüthen so gross, wie die des E. elongatum. Caracas: Chacaos. 625. E. Otto.

290. EPIDENDRUM XANTHINUM Lindl. in Bot. Reg. 1844. misc. p. 18. Huc Lindl. l. c. 229.:

E. foliis oblongis carnosis, caule longe aphyllo, sepalis petalisque patentibus ovalibus acutis aequalibus, labelli trilobi lobis lateralibus truncatis alte incisis intermedio cuneato dentato, callo plicato mucronato concavo serrato, clinandrio antice serrato.

Epidendrum ellipticum var. *flavum* Lindl. in Ann. Nat. Hist. IV. p. 382.

Wild in Brazil — Martius; Serro do frio, Minas Geräes — Gardner 5205; Caraccas — Linden 636; Loddiges (v. v. c. et s. sp.) — Flowers yellow, or vermilion, touched with orange. Stems three feet high according to Martius, but in all my specimens very much shorter. The leaves like E. ellipticum, but its yellow flowers are peculiar, and the central tubercle of the lip is destitute of the shoulders that run off into the side lobes in E. ellipticum.

291. EPIDENDRUM ELLIPTICUM Graham in Exot. Bot. t. 207. LO. n. 56. Lodd. Bot. Cab. t. 1216. Huc Lindl. l. c. 230.:

E. foliis ellipticis obtusis concavis succulentis, caule longe aphyllo nunc ramoso squamoso, sepalis petalisque patentibus lineari-lanceolatis aequalibus, labelli trilobi lobis dentatis lateralibus rotundatis, intermedio emarginato basi cuneato, callo concavo plicato acuminato utrinque in lobos laterales decurrente deorsum dentato, clinandrio serrato.

Epidendrum crassifolium LO. n. 55. Bot. Mag. t. 3543.

Wild in Brazil; Organ mountains — Miers; common on rocks in exposed places — Gardner 627; three to four feet high in marshy bushy places, Chapada de N. S. d'Abadio, May — Gardner 4365 (v. v. c. et s. sp.) — Very near E. elongatum, from which it differs in its elliptical blunt succulent leaves, paler flowers, and especially in the form of the tubercle of the lip, which is deeply furrowed, or plaited, shouldering off to the lateral lobes, and is not furnished there with a free tubercle as in E. elongatum. Flowers light rose-colour.

292. EPIDENDRUM ELONGATUM Jacq. ic. rar. III. t. 604. Bot. Mag. t. 611. LO. n. 54. Huc Lindl. l. c. 231.:

E. foliis ovato-lanceolatis acutiusculis, scapo longe aphyllo nunc ramoso squamoso, sepalis petalisque patentibus lineari-lanceolatis aequalibus, labelli trilobi lobis lateralibus truncatis denticulatis: intermedio duplo majore dilatato cuneato emarginato biloboque denticulato, callo carnoso concavo acuminato crenato utrinque verruca crenata aucto, clinandrio serrato.

Amphyglottis secunda Salisb. Hort. Trans. I. c.

Epidendrum secundum Linn. sp. pl. 1349. Jacq. Amer. 224. t. 137. LO. n. 57.

Wild in the West Indies; Trinidad — Schach; Dominica — Imray; Antigua — Nicholson; Martinique, on the mountains — Jacquin; Caraccas — Jacquin (v. v. c. et s. sp.) — Flowers bright rose-colour. Leaves longer and thinner, more ovate and acute than in E. ellipticum.

293. EPIDENDRUM LACERUM Lindl. in Bot. Reg. 1838. misc. 18. Huc Lindl. l. c. 232.:

E. foliis lineari-oblongis acuminatis obtusis, caule simplici apice aphyllo laxe squamato, sepalis petalisque patentibus lineari-lanceolatis subaequalibus acutis, labelli lobis aequalibus laceris pectinatis, intermedio apice mucronato integro, callo hippocrepico mucronato in labellum utrinque per crura 2 decurrente, clinandrio serrulato.

Wild in Cuba — Capt. Sutton (v. v. c.). — A slender species with narrow grassy leaves, pale rosy flowers, and a distinct entire point to the middle lobe of the lip. It has the habit of E. imatophyllum, but the leaves taper to the point, and the lip is wholly different.

294. EPIDENDRUM IBAGUENSE Humb. et Kunth, Nov. Gen. et Sp. I. 352. LO. n. 53. Huc Lindl. l. c. 233.:

E. foliis oblongis obtusis carnosis, caule simplici apice aphyllo nunc ramoso, sepalis oblongis acutis patentibus, petalis conformibus paulo minoribus, labelli laceri lobo intermedio obcordato lateralibus altius fimbriatis cordatis apice rotundatis, callo concavo carnoso trilobo apiculato, clinandrio serrato.

Wild in New Grenada; between Ibague and M. Tolima, at the height of 4440 feet — Humboldt and Bonpland; Peru, on walls and rocks about Loxa — Hartweg; deep ravines near Quito — Jamieson 94 (v. s. sp.) — A very fine species, with orange-coloured flowers. The leaves are an inch and a quarter broad, and the stems as thick as a swan's quill, and apparently often branched. When old they become as smooth as bamboo.

295. EPIDENDRUM NOVOGRANATENSE Rchb. fil. et Warsc. in Bonpl. II. 111.

Aff. E. ibaguensi, callis falcatis utrinque 2 calli limbo suppositis.

Tripedale. Foliorum vaginae bene transverse rugulosae (arpophyllaceae); laminae oblongae, apice inaequales, tres pollices longae, duas tertias pollicis latae. Pedunculus ultra bipedalis, pluri (9) vaginatus, vaginae arctae, dorso bicarinulatae. Racemus ineunte anthesi subcorymbosus illum Calanthidis veratrifoliae aemulans. Bracteae inferiores triangulo setaceae, ovarii pedicellati tertiam aequantes. Sepala oblonga apiculata; tepala angustiora, apicem versus vulgo crenulàta. Labelli lobi laterales tepali dimidium lati, postice alte semicordati, ceterum rotundati, antrorsum lacero serrati, postice denticulati, lobus medius subaequilatus, cuneatus, antice rotundatus cum sinu triangulo; lateribus anticis lacero serratus; callus depressus a gynostemii basi in basin lobo medii: antice trilobus, lobi laterales falcati, lobus medius quadratus apice retuso trilobulus; lateribus crenulatus; falculae 2 suppositae sinubus inter lobos anticos calli; falcula altera utrinque lateri medio calli supposita; androclinium trilobum, lobus verticis triangulus, lobi laterales decurrentes serrulati. — Blüthen getrocknet mennigroth, etwas grösser, als die des E. Lindenii; Blüthenstiel und Fruchtknoten über zollang. Neu - Granada. v. Warscewicz.

296. EPIDENDRUM TRICRURE Rchb. fil. et Warsc. in Bonpl. II. 112.

Aff. E. ibaguensi, labelli lobo medio quadrifido, callo depresso tricruri, cruribus lateralibus in labelli lobos laterales prostratis, crure medio latiori lobulàto in medium usque discum lobi medii.

Pedunculus tantum adest pedalis quadrivaginatus; apice racemosus per tres pollices. Bracteae lanceae acuminatae ovariis pedicellatis quadruplo - sextuplo breviores. Ovarium benè sed non abrupte cuniculatum. Sepala subaequalia oblonga apiculata, lateralia dimidiata, tepala angustiora apice minute crenulata, labelli lobi laterales postice alte semicordati, margine rotundato externo denticulati, antrorsum laceri, lobus medius transversus, aequilatus, sinu lineari parallelo a lobis lateralibus divisus marginibus externis rotundatus, fimbriatolaceratus, medio alte bifidus, utrinque etiam bifidus; androclinii angulis decurrentibus serrulatis. — Blüthe so gross, wie die des E. Lindenii Lindl.: schön lila. Die Lippe ist im Umkreise ganz rund und ziemlich häutig. Peru. v. Warscewicz.

297. EPIDENDRUM SOCORRENSE Rchb. fil. in Bonpl. II. 20. Huc: *Epidendrum Schlimii* Lindl. l. c. 234.

E. caule erecto ramoso, pedunculi vaginis paucis obtusis distantibus, racemo laxo, sepalis petalisque membranaceis oblongis reflexis, columnae elongatae basi tenui, labelli parvi lobis lateralibus hastatis cordatis postice

subdentatis apice trifidis intermedio lineari indiviso, callis 5 conspicuis oviformibus.

Wild in New Grenada; on trees in forests on the Volcan del Diablo, in the province of Socorro, at the height of 4—5000 feet — Schlim 75 (v. s. sp. comm. col. Linden.) — Leaves unknown. The stem branches like some shrub. The flowers are bright red, an inch and a half in diameter, with a very slender column and small lip.

298. EPIDENDRUM PANCHRYSUM Rchb. fil. et Warsc. in Otto et Dittrich Allg. Gartenz. XXIII. n. 40. p. 313.

Affine E. gracilicauli labelli lobis lateralibus obtriangulis angustis latere externo sinuato dentatis, lobo medio ligulato dilatato antice quinquedentato; callo ligulato postice obtuse corniculato utrinque in basi loborum lateralium, altero alteri subparallelo, antice in callum hippocrepicum plicatum latere antrorso rotundato et in apiculum subtus adnatum exeunte; androclinio tridentato.

Diese schöne Art hat goldgelbe Blüthen, die nur halb so gross sind, wie die eines gesunden E. ellipticum Grah. Die Vegetationsorgane kennen wir nicht, doch genügt die obige Diagnose zur Erkennung der Art. Dass Sepalen und Tepalen wie bei den Verwandten gestaltet sind, ist aus der Weglassung derselben in der Diagnose ersichtlich. — Herr v. Warscewicz endeckte diese Art in Peru. Wir erhielten sie aus dem Garten des Herrn Senator Jenisch durch den Obergärtner Herrn Kramer.

§ 10. *Euepidendrum*. Lindley in Hookers Journal III. 81. Lindl. l. c.

The essential distinction of this section is the leafy, not pseudobulbous stem, the adnate labellum, and the entire want of sheaths at the base of its peduncle, as in Amphiglottium, or of leafy spathes, as in Spathium.

The Species may be subdivided thus:

Folia equitantia . . . . A. *Equitantia*.
Folia plana, bracteis spathaceis saepius ancipitibus . . . B. *Planifolia spathacea*.
Folia plana, bracteis depauperatis.
floribus umbellatis . . . . C. *Planifolia umbellata*.
floribus racemosis . . . . D. *Planifolia racemosa*.
floribus paniculatis . . . . E. *Planifolia paniculata*.

In all cases the species with an entire lip form the beginning of each series, and those with it most divided the termination.

A. *EQUITANTIA*.

299. EPIDENDRUM VESICATUM Lindl. in Bot. Reg. 1838. misc. 89. Huc Lindl. l. c. 236.:

E. caule elongato, foliis inflatis equitantibus carinatis acutis glaucis, floribus terminalibus fasciculatis carnosis foliis vix longioribus, sepalis lineari-oblongis acutis, petalis conformibus angustioribus, labello subrotundo cordato linea media tuberculisque duobus basilaribus elevatis, collo ovarii medio vesicato.

Wild in Brazil — Loddiges (v. v. c.) — Leaves covered with a glaucous bloom, imbricated, and more like inflated carinate bracts, than true leaves. Flowers greenish white, with the neck of the ovary having an elevated semi-transparent blister near its middle. This blister is in fact the lower extremity of the cuniculus.

300. EPIDENDRUM EQUITANS Lindl. in Bot. Reg. 1838. misc. 76. Huc Lindl. l. c. 237.:

E. caule folioso ancipiti, foliis equitantibus ancipitibus lanceolatis elongatis acuminatis, flore solitario terminali pendulo, pedunculo ancipiti, spatha diphylla foliolo inferiore erecto foliaceo flore longiore, sepalis linearibus acuminatis patulis, petalis conformibus paulo brevioribus, labello ovato-lanceolato trilobo complicato cum columna basi con-

nato medio trilamellato; lobo medio carnoso semitereti recurvo lateralibus erectis membranaceis integris.

Wild in Mexico, Vera Cruz — Hartweg (v. v. c.) — In habit resembles Fernandezia. Flower dull chocolate brown.

B. *SARCOPHYLLA* Rchb. fil.

301. EPIDENDRUM MICROPHYLLUM Lindl. in Hook. Journ. III. 85. Huc Lindl. l. c. 133.:

E. ramulis foliosis, foliis distichis angustis carnosis canaliculatis acutis serrulatis racemo terminali tomentoso multo brevioribus, sepalis aristatis, petalis linearibus, labello oblongo acuto basi bilamellato venis tribus per medium obsoletis.

Epidendrum? sarcophyllum Focke, Tijdschrift nederl. IV. 67.

Wild in Demerara — Schomburgk; Hostmann 626, in herb. Mus. Par. and Miquel (v. v. c. et s. sp.) — A small creeping species, with woolly dull purple or greenish flowers. The cultivated plant has much longer foot-stalks to the flowers than the wild one. M. Focke observes that the pollen-masses are incumbent, not collateral, a circumstance which leads him to ask whether this is really an Epidendrum. See his excellent description in the work above quoted.

Huc: *Epidendrum? sarcophyllum* Focke in Tijdschr. Natuurk. Wetensch. IV. p. 67.

Rhizomate repente, caule fusiformi terete folioso, foliis semiteretibus mucronatis carnosis, racemo terminali paucifloro, sepalis oblongis acuminatis, lateralibus basi connatis subfalcatis, petalis multo angustioribus linearibus, labello suborbiculato acuminato concavo, columna terete clavata, clinandrio marginato bidentato.

Rhizoma repens, tortuosum, annulatum. Radices filiformes, griseae. Caules breves, fusiformes, teretes, foliosi, arrecti. Folia disticha, semiteretia, canaliculata, lineari-lanceolata, mucronata, basi vaginantia, carnosa, rigida, pollicaria. Pedunculus racemosus, terminalis, filiformis, erectus, 5—8-florus, foliis longior; purpureus, albido-lanuginosus. Flores minuti, bracteis vaginantibus acutis glabris viridibus suffulti, viridescentes. Perianthium patens. Sepala elliptico-oblonga, acuminata, convexa; lateralia labello supposita subfalcata, basi connata, adscendentia. Petala multo angustiora, lanceolata, apice attenuata. Labellum posticum, petaloideum, subrotundum, acuminatum, basi columnae adnatum ibique lamellis 2 acutis disco adpressis instructum, saccato-concavum, circa columnam conniveus. Columna teres, clavata, brevis, in ovarium resupinata, purpureo-picta; clinandrio obliquo, marginato, postice bidentato. Stigma rimale; labellum versus spectans. Anthera suborbicularis, apice bifida, convexa, clinandrio immersa, bilocularis, loculis septo transverso bipartitis. Pollinia quatuor ovata, per paria sibi invicem superposita, quorum 2 superiora longiuscule unguiculata, per paria caudiculis duabus pulverulentis replicatis parallelis adnata, flavida. Ovarium teres, purpureum, sparse pubescens, sub lente floccosum. Capsula globosa, apiculata, pisi magnitudine. — Herba pusilla epiphyta. Floret Junio, Julio, Novembri. — Hancce plantam ad calcem generis Epidendri collocavi, etsi mihi non liqueat, eam revera huc pertinere. Descriptionem e planta sedulo inspecta fidam ac fusam dare conatus sum. Videant Botanici, qui, me feliciores, librorum copia et reliquis naturae studioso necessariis adminiculis gaudent, an novum aliquod genus hic lateat. Sepala lateralia basi coalita, pollinia incumbentia, nec collateralia, ideoque caudicularum numerus mihi differentias satis conspicuas constituere videntur.

C. *TERETIFOLIA* Rchb. fil.

302. EPIDENDRUM TERES Rchb. fil. in Bonpl. III. 220.

Foliis teretibus, labelli compressi fundo basilari carinati lobis lateralibus humiliter angulatis erectis, lobo medio triangulo ancipiti.

Planta habitu Ponerae junciformis. Caulis usque octopollicaris. Vaginae nervosae (ancipites?). Folia carnosa sesquipollicaria 8—9. Caulis dein anceps in spatham foliaceam excurrens: fasciculus bractearum ancipitium (more E. equitantis) congestus ex axi racemi valde abbreviata. Flos ex icone Oerstediana flavus, olivaceus, incluso ovario subpollicaris vivus — siccus multo minor. Ovarium cuniculatum fusiforme. Sepala carnosa triangula, tepala spathulata acuta. Labellum basi gynostemii obtusi abbreviati adnatum. In summo monte El Viego 5500'. In monte Irasu 10,000'! Oerst.

303. EPIDENDRUM KARWINSKII Rchb. fil. in Bonpl. 1856. 327.: Huc: *Isochilus cernuum* Lindl. Ann. Nat. Hist. i. 1842. 184

Caulibus caespitosis filiformibus erectis, foliis teretibus obtusissimis, spatha terminali bivalvi, pedunculis elongatis, floribus cernuis, sepalis ovatis petalisque linearibus obtusis, labello concavo subtrilobo columnae adnato apice carnoso acuto utrinque rotundato membranaceo, linea elevata in medio.

Mexico. Karwinski. — The habit of this plant is that of Isochilus globosus, but its stem are nearly 6" high and stout in proportion, and the flowers are ¼" long.

304. EPIDENDRUM SUBULATIFOLIUM Rich. and Galeotti Orch. Mex. n. 51. Huc Lindl. l. c. 258.:

E. foliis teretibus subulatis acutis, scapo 4—5-floro, floribus intense luteis parvulis, labello suborbiculari integro sinuoso.

Wild in Mexico — Galeotti.

D. *PLANIFOLIA SPATHACEA.*

305. EPIDENDRUM RAMOSUM Jacq. Amer. 221. t. 132. Swartz Fl. Ind. Occ. I. 1505. LO. n. 31. Huc Lindl. l. c. 298.:

E. fruticosum, ramosum, foliis linearibus obtusis emarginatis, racemis terminalibus laxis flexuosis paucifloris, bracteis cucullatis obtusis ovario longioribus, sepalis ovato-lanceolatis petalisque linearibus acutis patentibus, labello subcordato ovato acuto concavo rigido.

Epidendrum rigidum Lodd. Bot. Cab. t. 1600.

Isochilus ramosum Spreng. Syst. III. 734.

Wild on trees in the West Indies, common; Demerara — Parker; French Guayana — Melinon 116; Mexico, rocks and trees at 8000 feet near Oaxaca, on the Pacific side — Galeotti 5034; Brazil, Organ Mountains — Miers (v. s. sp.) — Stem shrubby, somewhat dichotomous. Flowers small, greenish yellow. It varies in the size of its parts. In Sir William Hooker's herbarium is a Dominican specimen (Imray 179), with leaves two inches long by half an inch wide.

306. EPIDENDRUM STROBILIFERUM Rchb. fil. in Orch. Splitg. Huc *Isochilus ramosum* Focke in Tijdschr. Natuurk. Wetch. IV. 69.

Caule tereti ramoso folioso vaginato, foliis distichis carnosis ovato-lanceolatis apice oblique bidentatis, spica disticha terminali stricta compressa, floribus bracteis inclusis, sepalis lateralibus ovatis subfalcatis basi obliquis concavis acutis superiore oblongo plano latioribus, petalis paullo angustioribus linguaeformibus basi obliquis, labello cordato-hastato acuto concavo, ovario ventricoso

Radices filiformes, viridescentes. Caules teretes, ramosi, foliosi, vaginati. Folia disticha, vaginantia, ovata, oblongo-ovata vel ovato-lanceolata, apice oblique bifida vel emarginata, carnosa, uninervia, 1—2 centim. longa, 6—8 millim. lata. Spica disticha, terminalis, stricta, 3—4-flora, bracteata, compressa. Bracteae membranaceae, amplae, subtriangulares, plicato-cucullatae, amplexicaules, persistentes, floris longitudine. Perianthium clausum. Sepala aequilonga, lateralia ovata acuta inaequilatera, basi obliqua, concava, superiore oblongo obtuso plano erecto latiora.

Petala paullo angustiora, sepalis aequilonga, linguaeformia, basi oblique. Labellum unguiculatum, ungiculo columnae basi adnatum, cordato-hastatum, acutum, concavum, cum columna parallelum, marginibus conniventibus. Columna brevis, cum ovario continua semiteres, marginata, apice bicornis. Anthera opercularis 4-locularis. Pollinia 4 subrotunda, compressa, per paria caudiculis brevibus replicatis adfixa. Ovarium sub labello ventricosum. Capsula globosa, rostello obtuso terminata. — Herba epiphyta perennis, in Crescentia Cujete non rara. — Flores albi, inconspicui. — Floret Augusto.

307. EPIDENDRUM RIGIDUM Jacq. Amer. 222. t. 134. Swartz Fl. Ind. Occ. III. 1507. LO. n. 70. Hook. Ic. t. 314. Huc Lindl. l. c. 239.:

E. caule subsimplici, foliis distichis ovato-oblongis obtusis, spicae flexuosae rachi ancipiti, bracteis foliaceis dolabriformibus carinatis ovarii longitudine, sepalis coriaceis ovatis obtusis patentibus, lateralibus majoribus, petalis linearibus membranaceis, labelli postici cordato-ovati obtusi disco calloso cuniculo inflato, clinandrio dentato.

Wild in the West Indies, common; Caraccas — Purdie; Mexico — Pavon; Demerara — Loddiges, Schomburgk 889; Surinam — Splitgerber; Brazil, on trees, Barro do Rio Negro — Spruce 166, Martius, Miers (v. s. sp. et v. c.) — Stem simple, a span high, two-edged. Flowers small, green, turning yellow.

— Rchb. fil. in Bonpl. II. 20. Caracas. Wagener.

308. EPIDENDRUM CORIIFOLIUM Lindl. in Journ. Hort. Soc. VI. 218. c. ic. Huc Lindl. l. c. 240.:

E. foliis angustis coriaceis subdistichis carinatis concavis obtusis, spica densa terminali, bracteis coriaceis carinatis herbaceis distichis ovario longioribus, sepalis lateralibus crassis carinatis ovalibus, petalis linearibus spathulatis, labello subrotundo plano emarginato basi bicalloso, medio elevato.

Wild in Central America — Skinner (v. v. c.) — In all its parts tough, thick, leathery, and generally glazed, as it were, with a shining exudation. The narrow stiff leaves are blunt, about six inches long, concave, with a sharp midrib. Spike terminal, about four inches long, consisting of hard amplexicaul keeled bracts. Flowers greenish. Keel of lateral sepals serrated.

Lindl. Paxt. II. p. 85. n. 856.: *Epidendrum coriifolium* Lindl. — Flowers green. Central America. Tough, thick, leathery structure, generally glazed with shining exudation. The narrow stiff leaves are blunt, 6 inches long; concave, with a sharp midrib. Spike, which is terminal and about 4 inches long, consists of hard amplexicaul keeled bracts pressed close to the flowers and forming a kind of cone before they expand. The flowers are pale green, very firm and leathery, with a broad roundish convex lip having an elevated callosity along the middle. The lateral sepals, which are peculiarly thick, have a serrated keel at the back. — Nearly related to E. rigidum, but its leaves are much longer, and narrower, and the flowers three or four times as large, and extremely coriaceous. — Journ. Hort. Soc. VI.

309. EPIDENDRUM XYLOSTACHYUM Lindl. in Bot. Reg. 1845. misc. p. 70. Huc Lindl. l. c. 241:

E. caule simplici, foliis oblongis obtusis coriaceis mucronulatis, vaginis scabris, spica stricta flexuosa dura folio summo parum breviore, bracteis herbaceis cucullatis ovatis rigidis approximatis, floribus carnosis, sepalis oblongis concavis, petalis conformibus planis angustioribus, labello córdato ovato obtuso concavo margine recurvo, clinandrio integro.

Wild in New Grenada; Pennon du Pan de Azucar, on the side of Tolima, at the height of 6000 feet; February — Linden 1280 (v. s. sp.). — Resembles E. macrostachyum, but the bracts are larger, the spike is short, the flowers are larger, and the petals are almost as broad as the sepals, instead of being filiform. Flowers greenish white.

310. EPIDENDRUM MACROSTACHYUM Lindl. in Bot. Reg. 1845. misc. p. 70. Huc Lindl. l. c. 242.:

E. caule simplici, foliis oblongis mucronulatis vaginis scabriusculis, racemo longissimo cernuo angulato, bracteis magnis duris ovato-cordatis reflexis, floribus coriaceis, sepalis oblongis obtusis, petalis filiformibus, labello cordato obtuso laevi basi valde concavo, clinandrio integro.

Wild in New Grenada; on the rocks of the Pan Azucar, on the side of Tolima, at the height of 6000 feet; February — Linden 1279 (v. s. sp.) — A singular species, with racemes more than a foot long, covered with distant leafy bracts full half an inch long. Flowers green, fleshy. Stem from two to three feet high.

311. EPIDENDRUM IMBRICATUM LO. 71. Huc Lindl. l. c. 243.:

E. caule ramoso, foliis distichis lineari-oblongis obtusis, spicis ovato-oblongis imbricatis, bracteis carinatis obtusis, sepalis petalisque ovatis acutis subaequalibus erectis, labello ovato acuto obsolete crenulato.

Wild in Brazil; pendent from large trees in the Organ Mountains — Gardner (v. s. sp.) — Spike almost like a strobilus, two inches long, by one and a half inch broad. „Flowers white". — Gardner.

312. EPIDENDRUM BIFARIUM Swartz Fl. Ind. Occ. III. 1509. LO. 69. Huc Lindl. l. c. 244.:

E. foliis distichis cordato-lanceolatis acuminatis horizontalibus, spica terminali flexuosa, rhachi ancipiti, bracteis spathaceis compressis falcatis acutis carinatis, sepalis ovato-lanceolatis convexis, petalis brevioribus setaceis, labelli dilatati trilobi lobis lateralibus subrotundis integris, intermedio bilobo.

Wild in Jamaica — Mac Fadyen 4; on the trunks of trees on the Blue Mountains; September — Swartz (v. s. sp. in hb. Smith et Hooker). — Stem two to four inches high. Flowers greenish white. Bracts somewhat falcate, keeled, as long as the ovary. The only specimens I have seen of this are in Mr. Smith's herbarium, from Swartz himself, and in Sir William Hooker's. Its amplexicaul fleshy somewhat falcate leaves, and long naked ancipitous zigzag spike, are very different from anything else in the genus.

E. *PLANIFOLIA UMBELLATA.*

313. EPIDENDRUM PIPERINUM Lindl. in Ann. Nat. Hist. XV. 256. Huc Lindl. l. c. 245.:

E. caule ramuloso, foliis distichis succulentis oblongis obliquis obtusis laxe vaginatis, pedunculis brevissimis terminalibus subbifloris, sepalo dorsali petalisque filiformibus erectis, lateralibus ovato-lanceolatis carinatis horizontalibus, labello cordato-ovato cochleato ecalloso venis radiantibus in margine confluentibus,

Wild in Peru; on the road between Quito and the village of Machachi — Hartweg 1419 (v. s. sp.) — A small succulent species, when dried beautifully netted. It looks like a Peperomia.

314. EPIDENDRUM SCULPTUM Rchb. fil. in Bonpl. II. 89.

E. sculptum, juxta E. piperinum: foliis oblongis bi—tripollicaribus, punctulatis, torsione perpendicularibus, sepalis petalisque subaequalibus, labelli trilobi lobis lateralibus angulatis, lobo medio ligulato.

Folia oblonga, apice bilobula, valde micantia utrinquè minutissime punctulata, obliqua, lamina prope perpendiculari. Flores tres in apice caulis sessiles, bracteae amplae, apice rotundato retusae, ovaria ecuniculata aequantes, flores subcartilaginei, sepala ac tepala subaequalia, lineari-ligulata, obtusiuscula, labellum aequilongum, carnosum, trilobum, lobi laterales rhombeo rotundati, apice acutanguli, lobus medius productus, ligulatus obtuse acutus, gynostemii humilis androclinium marginatum

utrinque medio unidentatum. Von Chagres von Herrn Keferstein eingeführt, von Herrn Lehmann cultivirt.

315. **EPIDENDRUM TOLIMENSE** Lindl. in Bot. Reg. 1845. misc. p. 66. Orch. Lind. n. 29. Huc Lindl. l. c. 246.:

E. caulibus ramosis scaberrimis, foliis striatis ovato-lanceolatis, floribus 2—3 terminalibus sessilibus coriaceis, sepalis lineari-lanceolatis acutis striatis, petalis setaceis, labello subcordato ovato concavo apice carnoso basi ecalloso intus pubescente avenio.

Wild in New Grenada; in the forests of Tolima at the height of 10,000 feet, January — Linden 1272 (v. s. sp.). — Flowers small, a dull yellow colour. Branches excessively rough with irregular asperities. Leaves about one and a half inch long. It is much like E. Lima in habit, although so different in structure.

316. **EPIDENDRUM STENOPETALUM** Hook. in Bot. Mag. t. 3410. Huc Lindl. l. c. 247.:

E. caule flexuoso, foliis loratis acuminatis obtusis emarginatis, umbella sessili terminali pauciflora, sepalis petalisque angustioribus acutissimis, labello obovato rotundato convexo basi lamellato, columna brevissima, clinandrio carnoso lobato.

Epidendrum lamellatum Bot. Reg. 1843. misc. 60.

Wild in Honduras — Sir C. Lemon; Panama — Fendler 382; Jamaica — Mac Fadyen; Venezuela, in Merida, near St. Cristoval, in forests at the height of 3000 feet, October — Linden 710 (v. s. sp. et ic. pict.). — Sir W. Hooker says, that the lip is free from the column, Mr. Booth, that it is adherent; we cannot settle the point from want of examinable specimens. The flowers are bright rose-colour. The E. stenopetalum of Knowles and Westcott (Floral Cabinet II. p. 175), now irrecoverably lost, must be very different from this.

Epidendrum stenopetalum Hook. Rchb. fil. in Bonpl. II. 20. Die Lippe ist frei von der Säule. November. 6000' Caracas. Wagener.

Huc: *Isochilus elegans* Focke Tijdschr. Naturk. Wetschr. IV. 63.

Caule radicali simplici folioso, foliis distichis lineari-lanceolatis emarginatis strictis coriaceis, floribus terminalibus nutantibus, sepalis oblongis, petalis ovatis vix brevioribus, labello orbiculato acuminato.

Radices fibrosae, confertae. Caulis foliosus, teres, erectus, profunde ac regulariter sulcatus, griseus, 2—3 decim. longus, pennae anserinae crassitie. Folia disticha, lineari-lanceolata, sensim attenuata, obtusa, inaequaliter et profunde emarginata, stricta, coriacea, amplexicaulia, superiora vaginantia, 8—10 centim. longa, 1—1,2 lata. Spicae breves, terminales, 2—3-florae, nudae. Perianthium patens. Sepala oblonga, acuminata; lateralia inaequilatera, 1,8 centim. longa, 6 millim. lata. Petala ovato-rhomboidea, apiculata, sepalis fere aequilonga, centim. lata. Labellum petalis subconforme, orbiculatum, breve acuminatum, unguiculatum, unguiculo cum ima basi columnae connatum, concavum, basi minute imbricato-callosum, disco albo, 1,5—2 centim. longum, 1,2—1,5 latum. Columna brevissima, erecta, carnosa, conduplicata, concolor, apice biloba, lobis rotundatis conniventibus erectis, clinandrio lobis columnae tecto. Stigma labello reconditum. Anthera dorsalis, bilocularis, loculis bipartitis, septis membranaceis, in clinandrio immersa, albida. Pollinia 4 oblonga, dimidiata, compressa, flava. Caudiculae 4 filiformes, pulvereae, replicatae. Ovarium teres, leviter sulcatum. Capsula oblonga, obsolete triquetra. — Herba epiphyta perennis, non rara. — Flores purpureo-rosei, nutantes. — Floret Junio.

317. **EPIDENDRUM DIFFORME** Jacq. Ann. 223. t. 136. Huc: *Epidendrum umbellatum* Swartz, Nov. Act. Ups. VI. 68. Bot. Mag. 2030. LO. n. 28. Lindl. l. c. 248.

E. foliis oblongis subundulatis obtusis, umbella sessili, sepalis lineari-oblongis obtusis petalisque linearibus acutis patentibus, labello indiviso rotundato repando transverso basi bicalloso, clinandrio laciniato.

Epidendrum difforme Jacq. Amer. 223. t. 136.
? *Epidendrum subumbellatum* Hoffmg. in Linn. XVI. 232.
? *Epidendrum radiatum* Hoffmgg. Bot. Zeit. 1843. 832.

Wild in the West Indies; Trinidad — Sieber 379, Dominica — Imray 130, St. Vincent's — Guilding; Brasil, Minas Geraes — Widgreen 777; Guatemala; in woods near Samborondon — Hartweg (v. v. c. et s. sp.) — *Flowers green*, without a trace of spathe or equivalent bracts.

318. EPIDENDRUM LATILABRE Lindl. in Bot. Reg. 1841. misc. 163. Huc Lindl. l. c. 249.

E. foliis ovatis obtusis brevivaginantibus supremis suborbicularibus, umbella 2—4-flora sessili, sepalis lineari-oblongis obtusis patentibus, petalis lineari-spathulatis obtusissimis, labello repando sublobato emarginato basi bicalloso fere 4-plo latiore quam longo, clinandrio laciniato.

? *Epidendrum virens* Hoffmgg. in Linnaea XVI. 228.

Wild in the West Indies, Dominica — Imray; Peru, Myobamba, on trees — Mathews; Brazil, Rio Janeiro — Gardner 628, Organ Mountains — Miers (v. v. c. et s. sp.) — Very near E. umbellatum, of which it has the habit; but its lip, which is four times broader than long, and curved downwards on each side, so as to bear no little resemblance to a stiffly-starched lady's apron, gives it a different appearance. The flowers, too, seldom exceed four to an umbel, the petals are very blunt, and the leaves more round than oblong: in Mathew's Peruvian specimens they are almost orbicular. Nevertheless, it is much to be doubted whether this is anything more than a gigantic variety of E. umbellatum.

319. EPIDENDRUM ENSATUM Rich. and Galeotti Orch. Mex. n. 54. Huc Lindl. l. c. 250.:

E. „caule compresso ancipiti, foliis oblongo-lanceolatis acutis, floribus parvulis albido-brunneis, labello adnato trilobo lobis obtusis subaequalibus margine sinuosis".

Wild in Mexico — Galeotti.

320. EPIDENDRUM TETRACEROS H. G. Reichenbach in Bot. Zeit. 1852. p. 735. Huc Lindl. l. c. 251.:

E. caule elato ramuloso, foliis linearibus acuminatis, pedunculis tenuibus paucifloris (2—4), bracteis anguste triangulis acutis, sepalis cuneato-oblongis acutis, petalis duplo angustioribus, labello ab angustiori basi trapezoideo dilatato obtusangulo antice emarginato in sinu minute unidentato lineis tribus medianis elevatis, clinandrio 4-dentato dentibus mediis minutis lateralibus dolabriformibus.

Wild in Veragua; on Mount Chiriqui — Warczewitz. — Twice as large in every part as E. filicaule, which is nearly related to it. — Rchb.

321. EPIDENDRUM LACERTINUM Lindl. in Bot. Reg. 1841. misc. 109. Hort. Soc. Journ. II. 308. Huc Lindl. l. c. 252.:

E. foliis lanceolatis acuminatis pedunculo longioribus, racemo sessili umbellato, ovariis subsecundis longissimis pendulis bracteis setaceis multoties longioribus, sepalis lanceolatis acuminatis, petalis lineari-lanceolatis, labelli trilobi basi bilamellati laciniis lateralibus triangularibus intermedia lineari acuminata elongata, anthera cucullo integerrimo immersa.

Wild in Guatemala — Loddiges (v. v. c.) — The flowers hang down on long stalk like ovaries from one side of a short raceme; bright green, with the exception of the column, which is yellow; the lip is a little stained with purple, and has the appearance of a lizard's tail, the hind legs being outside the flower, and the head and shoulders buried within the cup.

Huc: *Epidendrum* (Amphiglottium) *indusiatum* Klotzsch Allg. Gts. 1854. 177.

Caule simpliciter ramoso, ramis fusiformibus remote foliosis utrinque

attenuatis; foliis papyraceo coriaceis lanceolatis acuminatis patenti recurvis, superioribus apicem versus tortis racemo terminali superantibus; racemo compressiusculo tripollicari 6—7 floro, basi bracteis 2 oppositis pollicaribus lanceolatis acuminatis foliaceis instructa; pedicellis teretibus flavidoviridibus $2\frac{1}{2}$ pollicaribus bractea semipollicaria 4 lineari lanceolata acuminata suffulta; perigonii foliolis flavo viridibus angustis setaceo-acuminatis sesquipollicaribus; columna clavata candida intus indusio plano bilobo ornata; labelli trifidi basi bifido-callosi laciniis lateralibus brevissimis falcato uncinatis reflexis; intermedia viridi lanceolata subulata 9 lineari patentissima.

Guatemala. v. Warscewicz col. Mathieu.

322. EPIDENDRUM NOCTURNUM Linn. Sp. Pl. 1349. Jacq. Amer. 225. t. 139. LO. n. 43. Bot. Reg. t. 1961. Bot. Mag. t. 3296. Huc Lindl. l. c. 254.:

E. foliis oblongis, floribus subgeminis, sepalis petalisque pedicello duplo brevioribus linearibus acuminatis patentibus, labelli trilobi lobis lateralibus ovatis integerrimis intermedio setaceo brevioribus, clinandrio dentato.

Epidendrum discolor Richard and Galeotti Orch Mex. n. 56.

Epidendrum tridens Pöppig and Endlicher N. G. et Sp. II. t. 108.

(A) Leaves oval, four to five times as long as broad.

(B) *latifolium*. Leaves very large, not more than twice as long as broad.

Wild in the West Indies; St. Vincent's — Guilding, Dominica — Imray 200, woods on the mountains of Martinique — Jacquin, Jamaica — Mac Fadyen; Surinam — Focke 126, Hostmann 36; Demerara — Parker; Peru, on rocks and stones — Pöppig (v. v. c. et s. sp.) — About a foot high. Flowers three inches long, white, with a tinge of green or crimson, extremely sweet-scented. It varies so much in the breadth of the leaves as to make it doubtful whether E. longicolle is really distinct.

Epidendrum nocturnum Jacq. Rchb. fil. in Bonpl. III. 68. Ocanna. Wagener.
— Rchb. fil. in Bonpl. II. 20. Caracas. 5000'. August. Wagener.

Huc: *Epidendrum Spruceanum* Lindl. l. c. 253.

E. foliis oblongis obtusis, floribus fasciculatis, sepalis petalisque linearibus acuminatis pedicello longioribus, labelli trilobi laciniis lateralibus semirhombeis obtusis apice dentatis intermedia setacea brevioribus, clinandrio integro.

Wild in Brazil; at the Barro do Rio Negro, on trees — Spruce 1466 (v. s. sp.) — Leaves as large as in the largest state of E. nocturnum. Flowers nearly six inches from tip to tip of the long attenuated sepals. „Sepals and petals greenish white; lip white". — Spruce.

323. EPIDENDRUM LONGICOLLE Lindl. in Bot. Reg. 1828. misc. 49. Bot. Mag t. 4165. Huc Lindl. l. c. 255.:

E. foliis strictis linearibus apice angustatis obtusis, floribus subsolitariis foliis brevioribus, sepalis lineari-lanceolatis acuminatis patentibus, pedicellis ovario subaequalibus, petalis linearibus acutis supra columnam convergentibus, labelli trilobi lobis lateralibus obtusis semiovatis integerrimis intermedio setaceo brevioribus; lamellis 2 callosis ad basin, collo ovarii elongato, clinandrio dentato.

Wild in Demerara — Schomburgk (v. v. c. et s. sp.) — Near E. nocturnum, but much less handsome. The sepals and petals are pale yellow; the lip white, with two yellow plates at the base.

F. *PLANIFOLIA RACEMOSA*.

324. EPIDENDRUM JAMAICENSE. Huc Lindl. l. c. 256.:

E. foliis oblongo-lanceolatis acutissimis racemo longioribus, bracteis

herbaceis acuminatis pedicellis aequalibus, floribus membranaceis, sepalis lanceolatis petalisque linearibus acutis, labello transverso indiviso cuspidato basi bicalloso, clinandrio cucullato indiviso.

Wild in Jamaica; on trees in the woods of Dunrobin Castle — Purdie (v. s. sp. in hb. Hooker). — Not much like any other species. The two upper leaves (?) in Sir W. Hooker's herbarium being broken off, I am not quite sure of the section. The flowers are as large as in E. verrucosum, and apparently white or yellow.

325. EPIDENDRUM LEDIFOLIUM Richard and Galeotti Orch. Mex. n. 50. Huc Lindl. l. c. 257.:

E. caule erecto fruticoso ramoso, foliis lanceolato-linearibus obtusiusculis, racemo subsessili laxo flexuoso, bracteis membranaceis setaceis pedicellis brevioribus, sepalis acutis petalisque obtusis angustioribus linearibus, labello cordato subrotundo emarginato subintegro basi bicalloso lineis 3 elevatis interruptis.

Wild in Mexico — Galeotti (v. s. sp. comm. cel. inv.) — A branching shrub, in the specimen before me almost eighteen inches high. Flowers yellow.

326. EPIDENDRUM COCCINEUM Rchb. fil. in Bonpl. III. 68.

Affine E. ledifolio foliis lineari-ligulatis sursum attenuatis, retusis, racemo cernuo, floribus carnosis, labello cordato ovato obtuse acuto basi carinulis quinis obscuris carnosis.

Caulis adest quinquepollicaris. Vaginae pulcherrime arpophyllaceae retusae. Laminae superiores adsunt bi- ad tripollicares; apice retusiusculae basi paulo dilatatae, bene carnoso-coriaceae margine tenues. Racemus cernuus brevis pluriflorus. Bracteae lanceo aristatae ovariis pedicellatis ter breviores. Perigonium valde carnosum. Sepala ovata acuta. Tepala ligulato-falcata subacuta paulo breviora. Labellum medio adnatum. Androclinium valde retusum. — Epiphyt. — Blüthen „coccinroth". 5000'. Mirz. Ocanna. Wagener. (Liegt vor: Tunguragua, Hall.)

327. EPIDENDRUM GASTROPODIUM Rchb. fil. MSS. Huc: *Gastropodium violaceum* Lindl. Ann. Nat. Hist. XV. p. 107.

Ramosum, disticho foliosum, foliis carnosis linearibus obtusis mucronulatis, vaginis striatis transverse rugosis; racemi laeves, sessiles, terminales, cernui. Flores parvi, membranacei, violacei. Bracteae subulatae, membranaceae; sepala conniventia, ovata, libera; petala lanceolata duplo minora; labellum cum columna connatum, ventricosum, ovatum, callo tripartito ad basin. Columna brevi pyramidalis, partis liberae marginibus latis crassis truncatis; clinandrium nudum. Anthera plana membranacea, 4 locularis; pollinia 4, oblonga, collateralia, omnino sejuncta, filis totidem rectis nec replicatis, laevibus, apice connato colligata; ovarium cuniculatum, antice ventricosum.

Popayan (Hartweg). — This genus is like the true species of Diothonaea, and like it in habits. It differs in its naked anther-bed and in the structure of the pollen-masses.

328. EPIDENDRUM PROPINQUUM Rich. and Galeotti Orch. Mex. n. 49. Huc Lindl. l. c. 259.:

E. „caule tereti foliis oblongo-lanceolatis obtusiusculis, racemis 4-floris, floribus brunneis, labello cordato margine denticulato".

Wild in Mexico — Galeotti.

329. EPIDENDRUM PHILIPPII H. G. Rchb. in Linn. XXII. 840. Huc Lindl. l. c. 260.:

E. racemo paucifloro, bracteis lanceolatis acutis ovaria pedicellata superantibus, sepalis oblongis, petalis lanceolatis basi cuneatis multo angustioribus brevioribusque acutis, labello ovato cordato latere utroque sinuato antice emarginato margine subtiliter crenulato, callis 2 minimis.

Wild on the Cordilleras; eastern side — Philippi (Rchb.) — Stem branched, leafy. Leaves longish, with a sharp point, and broad sheaths. — Rchb.

390. EPIDENDRUM SARCOSTALIX Rchb. fil. et Warsc. in Bonpl. II. 111.

Aff. E. Philippii bracteis minutis, labello cordato replicato, gynostemio apice valde clavato.

Caulis validus. Vaginae valde arpophyllaceae nervosae. Folia oblonga cum apiculo angustissime cartilagineo marginata, bipollicaria, medio unum pollicem lata, numerosa. Racemus reflexus, bracteae triangulo setaceae ovario quater-sexies breviores, ovarii cuniculus elongatus, haud amplus, bene conspicuus. Perigonium carnoso chartaceum. Sepalum summum oblongo-obovatum acutum, lateralia subaequalia paulo latiora, tepala a basi angusta dilatata, ligulata, obtusata, medio subacuta, labellum deflexum triangulum, postice utrinque semicordatum, calli 2 parvi rotunde tumidi in ima basi, gynostemium a tenuiori basi valde clavatum, anguli 2 antici oblique rhombei, tumidi, anthera in androclinio integro immersa. — Blüthen um die Hälfte grösser, als die des E. Arbuscula Lindl. Das E. orgyale hat eine gesägte Lippe und dergleichen Tepala. Peru. v. Warscewicz.

391. EPIDENDRUM ORGYALE Lindl. in Ann. Nat. Hist. XV. 256. Huc Lindl. l. c. 261.:

E. caule orgyali disticho foliato, foliis ovato-oblongis margine vaginisque scabris, racemo sessili erecto cylindraceo, bracteis membranaceis subulatis, floribus carnosis, sepalis ovalibus, petalis spathulato-linearibus serrulatis, labello cordato acuto serrulato callis duobus juxta basin unoque sulcato minore sub apice, cuniculo ventricoso.

Wild in New Grenada; Andes near Bogota — Hartweg (v. s. sp.) — Stem five feet high. Flowers apparently yellow.

392. EPIDENDRUM QUADRATUM. Huc Lindl. l. c. 262.:

E. caule alto folioso, foliis coriaceis ovato-oblongis obtusis, racemo sessili cernuo multifloro, floribus carnosis, bracteis linearibus herbaceis acuminatis, floribus carnosis, sepalis oblongis obtusis, petalis spathulato-lanceolatis minute denticulatis, labello subrotundo-quadrato serrulato undulato basi bicalloso axi crassa venisque lateralibus elevatis carnosis rugosis, clinandrio carnoso 4-dentato.

Wild in Tropical America — Linden (v. s. sp. comm. col. Linden, sine numero aut loc. nat.) — Near E. orgyale, with very much larger flowers.

393. EPIDENDRUM FIMBRIATUM H. B. K. I. 351. LO. n. 27. Huc Lindl. l. c. 263.:

E. foliis distichis oblongo-linearibus oblique retusis margine vaginisque scabris, racemo angusto terminali, floribus subsessilibus, sepalis linearibus retusis, petalis conformibus serratis, labello subrotundo-ovato serrato basi bilineato, columna nana.

Epidendrum alternans Lindl. in Hook. Journ. III. 88.

Wild in Peru; lofty mountains of Andimarcha — Mathews 1072 and 1897; ravines of Pichincha — Jamieson 67 and 95; woods of Guayan — Hartweg 1418; nearly on a level with Quito — Jamieson 9; province of Carabaya — Weddel 4668; Venezuela, terrestrial, in the Paramo del Zumbador, at the height of 11,000 feet — Linden 1478; New Grenada tufts in the open spaces of the vast forests of Quindiu, between Palmilla and El Moral, in the province of Mariquita, at the height of 8400 feet — Linden 1288, Purdie: Ocanna, on the borders of rivulets — Schlim 736 (v. s. sp.) — Slender plants about six inches high, with small racemose flowers, pale rose-coloured — Weddell; white, dotted with rose or violet — Linden. The lip varies in its degree of fimbriation.

Epidendrum fimbriatum Hb. B. Kth. Ocanna. Wegränder. 8000'. Blüthen weiss. n. 736.' Schlim.

Epidendrum fimbriatum Hb. B. Kth. Rchb. fil. in Bonpl. II. 20. Caracas. Wagener.

Epidendrum fimbriatum Hb. B. Kth. Rchb. fil. in Bonpl. III. 68. Ocanna. 7000'. Wagener.

394. EPIDENDRUM SCRIPTUM Rich. and Galeotti Orch. Mex. n. 53. Huc Lindl. l. c. 264.:

E. „caule tereti, foliis elliptico-oblongis acutis, floribus viridulis, racemo simplici terminali, labello adnato obsolete trilobo albo lineis purpureis scripto".

Wild in Mexico — Galeotti.

395. EPIDENDRUM LONGIPETALUM Rich. and Galeotti Orch. Mex. n. 55. Huc Lindl. l. c. 265.:

E. „caule compresso-diphyllo, foliis approximatis lato-ellipticis subacutis, floribus pallide roseis, racemis paucifloris scapum pedalem terminantibus, sepalis internis linearibus externa duplo superantibus, labello cordato obsolete trilobo".

Wild in Mexico — Galeotti. — Compare with E. antenniferum.

396. EPIDENDRUM TENUE. Lindl. in Hook. Journ. III. 88. Huc Lindl. l. c. 266.:

E. foliis distichis linearibus acuminatis oblique emarginatis, racemis acutis angustis simplicissimis (nunc casu quodam bifidis multifloris 10—20), bracteis ovatis acutis rigidis cucullatis pedicello longioribus, floribus erectis membranaceis, sepalis linearibus obtusis, petalis filiformibus, labello sesili ovato acuto concavo utrinque 1-dentato, venis baseos elevatis.

Wild in Brazil — Martius (v. s. sp. in hb. Martius). — The habit is that of E. parviflorum. Stems little more than six inches high.

397. EPIDENDRUM ANGUSTISSIMUM. Huc Lindl. l. c. 267.:

E. caulibus caespitosis erectis simplicibus, vaginis scabriusculis, foliis linearibus serrulatis mucronulatis, racemo tenui flexuoso foliis breviore, bracteis acuminatis ovario aequalibus, sepalis linearibus reflexis, petalis filiformibus, labello tripartito laciniis lateralibus cuneatis fimbriolatis, intermedia ovata.

Wild in New Grenada; province of Mariquita — Triana 128 (v. s. sp. comm. cel. Linden). — Near E. fimbriatum and tenue. Stem six to nine inches high. Flowers extremely small. The exact structure of the lip and column cannot be determined in the only specimen I posses.

398. EPIDENDRUM CARDIOGLOSSUM H. G. Reichenbach Linn. XXII. 841. Huc Lindl. l. c. 268.:

E. racemis paucifloris cernuis, bracteis lanceolatis acutis, sepalis oblongis acutis, petalis oblongis basi cuneatis ab apice latissimis acutis, labello trilobo oblongo cordato retusiusculo medio apiculato latere utroque emarginato, callis 2 in basi lineis 3 elevatis antepositis.

Wild in the Caraccas, March — Moritz 621 (Rchb.) — Stems strong, branched. Leaves longish, acute. Vaginae in the dried specimen very rough, loose. Flowers yellowish. — Rchb. Seems to be near E. scabrum.

399. EPIDENDRUM VERNIXIUM Rchb. fil. et Warscew. in Bonpl. II. 110.

Aff. E. cardioglosso tepalis cuneato-ligulatis subdenticulatis, labelli lobis posticis rotundatis alte semicordatis, lobo medio producto retusiusculo, venis loborum rugulosis, papula utrinque in sinu.

Caulis robustus, vaginae valde arpophyllaceae, folia oblongo-ligulata, apice obtusata, sesquipollicaris, dimidium pollicem lata, nunc latiora, superne pulchre vernixia, pedunculus caule multo tenuior, floribundus, tripollicaris, erectus (?), bracteae lineatriangulae ovario pedicellato prope decies breviores, perigonium chartaceo-carnosum, sepala oblonga acuta, summum subcuneatum, tepala a lineari basi oblongo-ligulata, obtusa, microscopice sublobulata, subdenticulata, labelli lobi postici semirotundi, alte

semicordati, limbo interno revoluti, minutissime denticulati, lobus medius ab angustiori basi dilatatus, apice retusiusculus (trapezoideus), margines antici impliciti, denticulus in medio, venae 5 mediae ac illae in lobis lateralibus ruguloso incrassatae, papula unica utrinque ad sinum inter lobos, anguli antici gynostemii falcato producti. — Von E. cardioglossum durch die Gestalt der Lippe und Tepalen und blüthenreiche Inflorescenz und langen Stengel sehr gut verschieden. Der Blüthenstiel ist halb geknickt, daher können wir über seine Stellung nicht bestimmt urtheilen; er scheint aufrecht. Blüthen viermal so gross, als beim gewöhnlichen E. scabrum (R. P.?) Lindl. Peru. v. Warscewicz.

340. EPIDENDRUM CONOPSEUM R. Br. in H. Kew V. 219. Elliott. Carol. II. 506. Hook. in Bot Mag. t. 3457. LO. n. 48. Huc Lindl. l. c. 269.

E. foliis paucis rigidis coriaceis acuminatis, racemo laxo multifloro, sepalis linearibus petalisque angustioribus spatulatis patentibus obtusis, labello obtuse trilobo lacinia intermedia ovata aut quadrata, callis 2 apice liberis, clinandrio cucullato integerrimo.

Epidendrum Magnoliae Mühl. Cat. 81.

Wild in the Southern States of North America; on evergreen trees sea coasts of Georgia and Carolina — Elliott; East Florida — Baldwin; Apalachicola, in West Florida — Drummond; Louisiana — hb. Hooker (v. s. sp. in hb. Hooker). — This, the most northern Epiphyte yet known, occurs, we are told by Elliot, as far to the north as „Eding's island, at the entrance of Port Royal inlet. To the south it becomes more common, and is found on several species of oak and other trees. Plant four inches high, or smaller. Flowers five to eight, green or pale yellow". The lip of Sir W. Hooker's Louisiana plant has the middle lobe ovate, not truncate as in that which flowered at Liverpool, and is represented in the „Bot. Mag." Sir W. Hooker states, that at the very thime when Drummond gathered it in Apalachicola ice formed so thickly in one night's time as to bear the weight of a man. No doubt it is sheltered by the leaves and branches of the evergreen trees on which it is found, from the nocturnal radiation which produces ice in such countries as Florida.

341. EPIDENDRUM ACUMINATUM Fl. Peruv. Syst. 248. LO. n. 31. Huc Lindl. l. c. 270.:

E. caulibus erectis subramosis, foliis lanceolato-linearibus acuminatis vaginis verruculosis, racemo pyramidali foliis subaequali, bracteis brevibus membranaceis acutis, sepalis oblongis patulis lateralibus columnae alte adnatis, petalis linearibus apiculatis basi angustatis univeniis subdenticulatis, labelli lobis lateralibus semiovatis obtusis postice subdentatis intermedio truncato tridentato 3-lineato basi bicalloso, clinandrio integro cucullato.

Wild in Peru, on trunks of trees 12,500 to 13 000 feet — Jamieson (v. s. sp. comm. cel. Hooker). — A grassy plant, with erect open racemes of greenish-yellow flowers.

342. EPIDENDRUM SCABRUM Fl. Peruv. Syst. 248. LO. n. 49. Huc Lindl. l. c. 271.:

E. caulibus ascendentibus subramosis, foliis coriaceis ovato-lanceolatis obtusis, racemo denso oblongo reflexo sessili, sepalis oblongis lateralibus columnae adnatis, petalis filiformibus, labello 3-partito basi bicalloso laciniis aequalibus, lateralibus denticulatis intermedia indivisa, columna brevi crassa, clinandrio integro.

Wild in Peru; mountains of Pillao and Munna — Ruiz and Pavon; Surrucucho on the trunks of trees, Chimborazo, on rocks at 12,000 feet — Jamieson 10 and 151; valley of Bannos — Hall, Chachapoyas — Mathews 3200; Andimarcha — Id. 1063; New Grenada, Bogota — Gudot 1; Pamplona — Purdie (v. s. sp. comm. cel. Hook.) — Very like E. varicosum, among the Amphigolus, as well as E. chioneum. Varies much in the size of both leaves and flowers.

343. EPIDENDRUM TORQUATUM Lindl. in Benth. Pl. Hartw. p. 149. Huc Lindl. l. c. 272.:

E. caule elongato aspero, foliis oblongis coriaceis obtusis distichis,

spica sessili recurva, floribus coriaceis, sepalis ovatis acutiusculis, petalis tenuioribus basi angustatis parum angustioribus, labelli trilobi basi bicallosi lobis lateralibus subtruncatis, intermedio cuneato tridentato.

Wild in Peru; Popayan, on the ascent to the Paramo de Guanacas, at 10,500 feet — Hartweg 1424; on the ground on the Cordillera of Loxa — Id.; New Grenada, on the ground, from the Quebrada between Monserrate and Guadalupe, in the province of Bogota, at the height of 8160 feet; March — Linden 1288 (v. s. sp.) — Near E. scabrum, but with much larger and more coriaceous flowers. It varies very much in the size of the flowers, which are yellowish — Linden, and very fragrant — Hartweg. It seems to be always terrestrial.

344. EPIDENDRUM CHIONEUM Lindl. in Bot. Reg. 1845. misc. p. 78. Huc Lindl. l. c. 273.:

E. caule laevi ramoso, foliis ovato-lanceolatis mucronulatis, racemo capitato cernuo, bracteis erectis herbaceis acuminatis ovario longioribus, sepalis subrotundo-ovatis apiculatis, petalis obovatis minute serrulatis, labelli laciniis integris intermedia lineari medio rugulosa basi bicallosa cuneata, lateralibus minoribus acutis, clinandrio alte marginato.

Wild in New Grenada; on the ground, Paramo, between Venta Quemada and Tunja, at the height of 12,000 feet; March — Linden 1344 (v. s. sp.) — The flowers are pure white, in small close heads, an inch or more long. It is very near E. cernuum, but differs in the form of its sepals and the lobes of the lip, if that species is correctly described. Leaves about two inches long by a quarter of an inch wide.

345. EPIDENDRUM CERNUUM Humb. et Kunth. Nov. Gen. et Sp. I. 353. LO. n. 46. Huc Lindl. l. c. 274.:

E. foliis oblongis obtusis coriaceis, spica elongata cernua, sepalis lanceolatis margine revolutis cuspidatis, petalis conformibus angustioribus, labelli trilobi margine reflexi lobis lateralibus subrotundis acuminatis intermedio triplo majore concavo convexo lineari apice rhombeo axi coriacea basi bicallosa.

Wild in Peru; on trees in the Ravines of the Andes of Popayan, between the town of La Erre and the valley of Yanacatu, at the height of 5060 feet — Humboldt and Bonpland; forests on the western side of Pichincha — Jameson (v. s. sp. in hb. Hooker). — Stem three feet high, and more. Spike three inches long. Flowers sweet-scented, yellowish green.

346. EPIDENDRUM MATUTINUM H. G. Reichenb. in Linn., XXII. p. 840. Huc Lindl. l. c. 275.:

E. racemo incurvo brevi multifloro, bracteis lanceolatis acutis ovariis pedicellatis multo brevioribus, sepalis lanceolatis acutis petalis subaequalibus sub apice dilatatis, labello libero trilobo lobis lateralibus margine externo rotundatis apice acutis medio producto ligulato acuto lamellis 3 elevatis in medio, callis 2 parvis in basi.

Wild in Venezuela; Merida, Jan. — Moritz 1065 (Rchb.) — Stems strong. Leaves longish, acute, keeled beneath. Flowers yellowish. — Rchb.

347. EPIDENDRUM INSECTIFERUM. Huc Lindl. l. c. 276.:

E. foliis oblongis acutis undulatis striatis, racemo longipedunculato stricto dense multifloro, bracteis setaceis pedicellis brevioribus, sepalis petalisque linearibus acuminatis, labelli trilobi basi bicallosi linea elevata interjecta laciniis lateralibus rotundatis antice acutis intermedia ovata obtusa apiculata, clinandrio cucullato integro.

Wild in Bolivia — Bridges (v. s. sp.) — A large species. Stem nearly a foot high up to the base of the peduncle, which is perfectly naked, and, including the raceme, nearly a foot long. Leaves six inches long by more than two broad. Flowers small, membranous, on long slender stalks.

348. EPIDENDRUM ARBUSCULA Lindl. in Benth. Pl. Hartw. p. 93. Huc Lindl. l. c. 277.:

E. caule tereti fruticoso ramoso, ramulis vestitis apice 2—3-phyllis, foliis oblongis coriaceis patentibus, racemis oblongis densis terminalibus subsessilibus cernuis, bracteis lineari-lanceolatis acuminatis membranaceis patentissimis pedicellis duplo brevioribus, sepalis lanceolatis acutis carnosis, petalis tenuioribus linearibus apice paulo latioribus, labello trilobo cordato basi tricalloso, laciniis lateralibus rotundatis, intermedia emarginata undulata.

Wild in Mexico; San Juan Sacatepeques; April — Hartweg (v. s. sp.) — A plant with a large branching stem, leathery leaves, three or four inches long, and many pale stout roots. Flowers dull chocolate, relieved by a patch of yellow in the middle of the labellum, which is so folded back at the sides and front, that, although almost oricular, it presents the form of an oldfashioned three-cocked hat.

349. EPIDENDRUM INCOMPTUM H. G. Rchb. in Linn. 1852. p. 785. Huc Lindl. l. c. 278.:

E. caule valido squamoso superne folioso, foliis summis anthesi persistentibus cuneato-oblongis acutis erectis, racemo plurifloro congesto, bracteis lanceolatis acuminatis ovaria infima pedicellata subaequantibus, sepalis oblongis petalisque linearibus acutis, labello transverso trilobo basi rotundato lobis lateralibus divaricatis medioque producto triangulis, clinandrio quinquelobo.

Wild in Veragua; on Mount Chiriqui — v. Warszewicz. — Next to E. Arbuscula — Rchb.

F. *PLANIFOLIA PANICULATA.*

350. EPIDENDRUM GRAMINEUM LO. n. 30. Huc Lindl. l. c. 279.:

E. foliis distichis lineari-lanceolatis acutis striatis, racemo terminali paniculato, sepalis oblongis acutis, petalis linearibus, labello cordato acuto medio plicato basi calloso, clinandrio integro.

Wild in Peru — Pavon (v. s. sp. olim in hb. Lambert).

351. EPIDENDRUM RECURVATUM Lindl. in Bot. Reg. 1845. misc. 77. Huc Lindl. l. c. 280.:

E. foliis ensiformibus mucronatis strictis, panicula gracili ramis longis recurvis aequalibus, bracteis apice setaceis, floribus membranaceis distantibus, sepalis ovato-oblongis, petalis lineari-spathulatis, labello alte cordato subquadrato.

Wild in Venezuela; heights of Bailadores, in the province of Merida, 6000 feet above the sea; June — Linden 1472 (v. s. sp.) — A plant with the habit of E. tridactylum, etc., but with rose-coloured flowers, which are three or four times as large.

352. EPIDENDRUM DIFFUSUM Swartz, Fl. Ind. occ. III. 1508. LO. 25. Bot. Mag. t. 3565. Huc Lindl. l. c. 280.:

E. foliis oblongis, caule ancipiti, panicula filiformi terminali ramosissima, sepalis lineari-lanceolatis petalisque setaceis erecto-patentibus striatis, labello cordato angusto membranaceo acuminato trilineato basi calloso.

Seraphyta multiflora Fisch. Ann. Nat. Hist. VIII. 471.
Epidendrum tenuiflorum Hort.

Wild in Jamaica; on trees in the temperate parts — Swartz, Mac Fadyen (v. s. sp. et v. c.) — Flowers small, crimson.

353. EPIDENDRUM FUNCKIANUM Rich. and Galeotti, Orch. Mex. n. 52. Huc Lindl. l. c. 282.:

E. „caule articulato, foliis ovalibus obtusissimis apice bilobis, floribus parvulis brunneis paniculatis, labello adnato cordato acuto“.

Wild in Mexico — Galeotti.

354. EPIDENDRUM MICRANTHUM Lindl. in Hook. Journ. III. 88. Huc Lindl. l. c. 283.:

E. foliis distichis lanceolatis acuminatis, racemo v. panicula racemosa virgata, bracteis setaceo-acuminatis florum dissitorum longitudine, sepalis oblongis carnosis obtusis subaequalibus, petalis linearibus, labello oblongo quadrato indiviso.

Wild in Peru — Mathews 1858. (v. s. sp.) — A plant with flowers scarcely a line long, and all the habit of E. tridactylum.

355. EPIDENDRUM AQUATICUM Lindl. in Ann. Nat. Hist. 12.

E. caule ascendente ancipiti ramoso, foliis ovato-oblongis acutis, panicula simplici pauciflora (aut racemo) paulo brevioribus, sepalis oblongis petalisque linearibus obtusis, labello carnoso alte cordato cucullato, clinandrio carnoso utrinque bidentato.

Wild in Brazil; Goyaz, on the margin of a small stream near N. S. d'Abadia; May — Gardner 4364; Minas Gerâes, Serra de Curaca; Oct. — Gardner 5206 (v. s. sp.) — Branches four or five inches long; leaves from half an inch to two inches. Flowers yellowish.

356. EPIDENDRUM VINCENTINUM Lindl. in Hook. Journ. III. 88. Huc Lindl. l. c. 285.:

E. caule ancipiti, foliis distichis anguste lanceolatis acutissimis paniculа pauciflora laxa filiformi brevioribus, sepalis lineari-lanceolatis, petalis filiformibus, labello subrotundo crispo.

Wild in St. Vincents — Guilding (v. s. sp. hb. Hooker). — A small delicate species, not more than four inches high, with minute membranous flowers, disposed in a short, loose panicle, with filiform pdicels.

357. EPIDENDRUM FRIGIDUM Lind. in Bot. Reg. 1845. misc. p. 76. Orch. Lind n. 36. Huc Lindl. l. c. 286.:

E. caule stricto indiviso, foliis imbricatis coriaceis ovato-oblongis obtusis emarginatisque, panicula racemosa nutante, bracteis coriaceis ovatis abrupte acuminatis, floribus valde carnosis, sepalis ovatis obtusis alte costatis, petalis linearibus erectis, labello complicato transverse ovato subtus obtuse carinato basi bicostato, columna brevissima.

Wild in Venezuela; on damp rocks a short distance from eternal snow, at the height of 13,000 feet, on the Sierra Nevada of Merida — Linden 643; Peru, on the volcano of Pasto, on trees at 13,000 feet — Jamieson (v. s. sp.) — This singular plant has a stem a foot and a half high, densely covered with leaves, which are stiff, and curved back at the edge. The flowers, which are pale rose, grow in long drooping panicled racemes. Linden states, that it grows on wet rocks, at but little distance from the eternal snow, at the height of 13,000 feet above the sea. He adds that it is especially remarkable for all the plant, flowers included, being covered over with varnish. Jamieson's Pasto plant is weak and racemose, not panicled.

— Rchb. fil. in Bonpl. II. 20. Herr Prof. Lindley erwähnt nicht, dass Scheiden sowohl als Hauptblüthenstiel zweischneidig sind. Die getrockneten Blätter sah ich allemal eingerollt. Die dichte Inflorescenz mit hunderten von carmoisinrothen Blüthen ist sehr ausgezeichnet. Merida. 3000'. December. Wagener.

358. EPIDENDRUM FRUTEX Rchb. fil. Xenia I. p. 95. Tab. 97:

Aff. Epidendro frigido Linden! paniculae distichae (nec secundae) rhachi teretiuscula (nec ancipiti), ramulis abbreviatis, labello obtuso rhombeo.

Caulis ultra pedalis calamo gryphino crassior. Foliorum vaginae valde et rude arpophyllaceae praesertim in parte sublaminari. Laminae oblongo-ligulatae apice attenuatae obtuse acutae, sex-septempollicares, pollicem latae. Pedunculi rami primarii a vaginis hyalinis nunc oblique insertis, triangulis, apiculatis fulti, octo, deflexo ramulosi. Ramuli carnosi bracteis triangulis distichis abbreviatis vestiti. Ovaria ob-

longa seu prope sphaerica, aptera, bacciformis, forsan succulenta, sed more consueto dehiscentia. Perigonium carnosum. Sepalum summum triangulum. Sepala lateralia oblique triangula nervo medio carinato. Tépala linearia. Labelli linea media carinata. Gynostemium longius, quam illud Epidendri frigidi. — Herb. Pavon. — Boissier.

359. EPIDENDRUM DURUM Lindl. in Hook. Journ. III. 87. Huc: Lindl. l. c. 287.:

E. foliis distichis ovato-lanceolatis acutis, vaginis rugosis, panicula subsessili simplici pauciflora, bracteis duris ovatis cucullatis acuminatis ovariis aequalibus, sepalis oblongis acutis duris striatis, petalis angustioribus, labelli postici trilobi transverse rhombei lobis lateralibus erectis truncatis intermedio triangulari acuto.

(B) *parviflorum*. Leaves narrower. Flowers much smaller.

Wild in Guayana — Schomburgk; B, Brazil, Minas Gerães — Weddell, 1272, in hb. Mus. Par., (v. s. sp.). — Stems simple or branched, from nine to eighteen inches high, equally covered with hard distichous leaves. Flowers small, apparently yellow. The inflorescence is occasionally simple. Differs from E. carnosum in having smaller and less fleshy flowers, and a panicle with a shorter stalk.

360. EPIDENDRUM CARNOSUM Lindl. in Hook. Journ. III. 87. Huc Lindl. l. c. 288.:

E. foliis coriaceis distichis ovato-lanceolatis acutiusculis, vaginis rugulosis, panicula racemove rigida striata multiflora, bracteis duris ovatis cucullatis acutis ovarii longitudine, sepalis carnosis oblongis obtusis, lateralibus hinc gibbosis carinatis latioribus, petalis sepalo dorsali conformibus, labelli postici trilobi carnosi lobis lateralibus rotundatis erectis intermedio conico solido.

Wild in Brazil — Zuccarini (v. s. sp.). — A rigid plant, with the habit of E. elongatum. Panicle stiff, many flowered. Flowers pale yellow; when dry, hard, thick, black; evidently must be very fleshy when recent.

361. EPIDENDRUM PURUM Lindl. in Bot. Reg. 1844. Misc. 75. Huc Lindl. l. c. 289.:

E. caule fusiformi elongato, foliis ensiformibus obtusis, floribus paniculatis ramis racemosis gracilibus foliis paulo erectioribus, sepalis lineari-lanceolatis, petalis filiformibus, labelli tripartiti basi 3-costati laciniis indivisis acutis lateralibus cordatis repandis.

Wild in the Caraccas — Linden; New Grenada, on trees near La Paz — Purdie, (v. v. c. et s. sp. in hb. Hooker). — Leaves not half an inch wide, six or eight inches long. Flowers in a thin panicled raceme, and of a light pale green colour. The lobes of the lip vary a little in form, the middle one especially being sometimes linear.

— Rchb. fil. in Bonpl. III. 21.

Caule fusiformi crasso, foliis paucis (4) lineari-lanceolatis apice inaequali bilobulis, panicula pauciramosa, bracteis squamaeformibus acutis, sepalis lanceis, medio dilatatis, lateralibus dimidiatis, tepalis linearibus acutiusculis, labello cum toto gynostemio connato, trilobo, lobis lateralibus basi semicordatis antice acutis, lobo medio lanceo producto, carinis tribus in basi, media apicem labelli usque producta.

Blüthen weiss, Lippengrund gelblich. Caracas. 4000'. November. Wagener.

362. EPIDENDRUM NAUCRATES Rchb. fil. in Bonpl. II. 20.

Caule ancipiti folioso, foliisneariligulatis apice inaequali bilobis, spica gracili multiflora, basi unisquamata, bracteis lineari-setaceis ovaria pedicellata tertia parte aequantibus, sepalis oblongis acutis carnosis, tepalis filiformibus apice dilatatis, labello trilobo carnoso, lobis lateralibus obtusis erectis, lobo medio triangulo cucullato erecto, disco incrassato, margine limboso, carinis 3 confluentibus in medio, gynostemio incurvo, androclinio excavato cordiformi.

Blüthen gelbgrün, so gross wie bei E. Schlimii. Ansehen des E. purum. Cultivirt bei Herrn Consul Schiller (Januar 1853, n. 126).

363. EPIDENDRUM SUBPURUM Rchb. fil. in Bonpl. III. 21.:

Caule fusiformi gracili foliato, foliis lineariligulatis apice attenuatis obtusiuscule acutis, pedunculo incurvo multifloro, bracteis squamiformibus minimis, sepalis lanceolatis acutis, tepalis linearibus apicem versus paulo latioribus, labello cum gynostemio apicem usque connato, lamina libera triloba, lobis lateralibus basi semicordatis obtuse rhombeis, divaricatis, minute crenulatis, lobo medio obovato retuso bilobulato, carinulis obtusangulis 2 in ima basi abbreviatis in nervos tres elevatos excurrentibus nervis his basi antecarinulari iterum carinuligeris.

Blüthen mehr lederartig als bei E. purum Lindl., sonst sehr ähnlich, wie auch alle Grössenverhältnisse stimmen. Caracas. Wagener.

364. EPIDENDRUM LANIPES. Huc: Lindl. l. c. 291:

E. foliis ensiformibus obtusis panicula stricta brachiata brevioribus, rachi scabriuscula, ovariis lanulosis, sepalis lineari-oblongis obtusis, petalis filiformibus, labelli lobis lateralibus semi-ovatis intermedio cuneato retuso basi bicalloso, clinandrii bilobi laciniis 2-dentatis.

Wild in Peru; Chachapoyas — Mathews 3183 (v. s. sp.). — Flowers apparently yellow in a panicle nine inches long, and as much broad. The woolly ovary is quite peculiar.

365. EPIDENDRUM AGATHOSMICUM H. G. Reichenb. Linnaea XXII. 841. Huc Lindl. l. c. 292.:

E. paniculae ramis squamis oblongis acutis suffultis, bracteis minimis cuspidatis, sepalis oblongis acutis basi cuneatis, petalis linearibus apice ovatis acutis, labello trilobo lobis lateralibus semiovatis basi aliquid cuneatis denticulatis callis 2 minimis in basi, lobo medio a basi cuneata dilatato transverso antice emarginato denticulato.

Wild in the Caraccas; on the top of the mountain, near the Venta — Moritz 228 (Rchb.). — Leaves longish, acute, carinate. Flowers snow-white, fragrant. — Rchb.
— Rchb. fil. in Bonpl. II. 20. Truxillo. Wagener.

366. EPIDENDRUM FLORIBUNDUM Humb. et Kunth. Nov. Gen. et Sp. I. 353. t. 86. L. O. 98. Hooker in Bot. Mag. t. 3697. Huc: Lindl. l. c. 293:

E. foliis lanceolato-oblongis acuminatis submembranaceis, panicula maxima racemosa, sepalis reflexis lanceolatis, petalis filiformibus, labelli quadrilobi basi bituberculati lobis lateralibus subrotundis terminalibus linearibus divaricatis.

Epidendrum densiflorum Hook. in Bot. Mag. t. 3791.
Epidendrum ornatum Lemaire; fid. Rchb.

(B) *lilacinum* H. G. Rchb. Linn. XXII. pag. 840. Flowers purple, larger than usual, with a white lip.

(C) *convexum*. Flowers smaller, shorter, with a roundish, denticulate, obscurely four-lobed lip.

Wild in Peru — Humboldt and Bonpland; B. Venezuela — Moritz 233, Funck and Schlim 1448; C. New Grenada, in the woods of the Hacienda de Palmas, near Guaduas — Hartweg (v. v. c. et s. sp.) Not Mexican, as stated in Bot. Mag. on the authority of the Collection at Woburn. — A great branching green-flowered species, very much like E. paniculatum and laxum, differing however in the want of spathaceous bracts.

— Rchb. fil. in v. Mohl et v. Schlechtdl. Bot. Zeit. 1852. 887. Huc *Epidendrum ornatum* Ch. Lem.

Epidendrum (Amphyglottium) *ornatum* Ch. Lemaire V. Houtte Flores des Serres IV. 344. — Fleurs verrubuleuses en dehors, vertes, à segments fléchis en arrière; le gynostème et le labelle sont blancs; celui ci orné d'une macule coccinée.

Racemo terminali racemoso longissime nutante, bracteis minimis subulatis, sepalis carnosis oblongo cochleariformibus verruculosis, petalis filiformibus ad apicem latioribus omnibus retroflexis viridibus, pedicellis flore duplo longioribus, ovario verruculoso, labelli trilobi coriacei ad discum convexum tricarinati, ad basin bi-tuberculati lobis lateralibus irregulariter rotundatis expansis, mediani lobulis oblongis obtusis divaricatis, inter eas carina disci evanescenti; pseudobulbis nullis, caulibus caespitosis gracilibus pedalibus et ultra, atroviolaceis, foliis alternatim distichis vaginantibus, inferioribus lanceolatis brevioribus, medianis oblongis angustis acuminatis violaceis et violaceo densiore nervatis.

367. **EPIDENDRUM VERRUCOSUM** Swartz Fl. Ind. Occ. III. 1497. Huc Lindl. l. c. 294.:

E. foliis distichis lanceolatis oblique patentibus, vaginis verrucosis, floribus paniculatis, sepalis oblongis concavis, petalis spathulatis basi angustatis, labello multo longiore 4-lobo laciniis linearibus obtusis divaricatis anterioribus dentatis, callis 2 sulcatis alteroque minore interposito.

Wild in Jamaica: on the trunks of trees — Swartz, Purdie, Bancroft etc.: New Grenada — Purdie (v. s. sp.) — Stems simple erect, two or three feet high. Sepals and petals pale green. Lip yellow. Flowers sometimes in a large branching panicle, sometimes in a mere raceme, persist without change long after the ovary has acquired a fusiform figure of considerable dimensions. The sheaths of the leaves are quite smooth in very strong specimens.

368. **EPIDENDRUM PSEUDEPIDENDRUM** Rchb. fil. Xenia I. 160. Pl. 53. Huc: *Pseudepidendrum* v. Mohl et v. Schlechtdl. Bot. Zeit. 1852. 733.

Perianthium et gynostemium Euepidendri. Differt egregie androclinio exciso semilunato, polliniis quaternis valde inaequalibus, ancipitibus, oblongo-falcatis, externis duplo majoribus, omnibus ima basi connatis, replicatis in caudiculam argute tridentatam, dente medio majori, polliniis externis breviorem.

Ps. spectabile. Ich besitze einen einzigen spannenhohen Stängel. Blätter länglich, spitz, keilförmig, trocken von der Textur derer des E. laeve und E. cornutum, 5 Zoll lang, in der Mitte 1½ Zoll breit. Der Blüthenstiel 4-zöllig, 1 Zoll über dem Grunde umscheidet. Der Hauptstiel zweischneidig mit Ueberbleibseln von 3 Deckblättern. Daneben in derselben Scheide ein jüngerer, dünnerer Stiel mit 2 Deckblättern. Blüthen so gross, wie die des E. atropurpureum, aber alle Verhältnisse anders, da bis auf die Lippenplatte alle Theile schmal sind und die Säule sehr ausgezogen ist. Die äusseren Hüllblätter länglich, stumpf, gespitzt, am Grunde keilförmig. Die inneren schmal lineal, an der Spitze allmählig ausgebreitet, länglich, spitz. Säule auffallend lang: so lang als äussere Hüllblätter. Die freie Lippenplatte bildet ein symmetrisches Paralleltrapez. Die Basis beiderseits geöhrt, die vordere gleichlaufende ausgerandet, die Seiten (die ungleichlaufenden) gebuchtet und sägezähnig; eine vorn dreilappige Platte am Lippengrund geht nach der Säule zu in 2 Leistchen über, während drei erhabene Linien sich bis zur Lippenspitze ziehen. Anthere —. „Hüllblätter grün, Säule grün am Grunde, dann rosa, Lippe zinnoberroth."

§ 11. *Pleuranthium.* Rchb. fil. in Linnaea XXII. p. 841.

These are long leafy stemmed species with lateral inflorescences, and an adnate lip.

369. **EPIDENDRUM DENDROBII** H. G. Rchb. in Linn. XXII. p. 841. Huc Lindl. l. c. 295.:

E. pedunculis nunc simplicibus, nunc ramosis, squamis ovatis nunc acutis imbricatis, sepalis oblongis lateralibus obliquis, petalis obtusis cuneatis, labello rotundo basi obtuse hastato ante basin bicalloso.

Wild in Venezuela: Merida, on mountains — Moritz 1074 (Rchb.) — Stems erec:,

with many leaves, which are longish, acute, somewhat carinate. Flowers yellowish. — Reichenbach.

370. EPIDENDRUM AGGREGATUM Lindl. in Hook. Journ. III. 84. Huc Lindl. l. c. 296 :

E. foliis distichis lanceolatis acuminatissimis, racemis oppositifoliis subsessilibus brevissimis basi squamatis, floribus corymbosis, labello subrotundo cordato basi bilamellato.

Wild in Peru — Mathews 1901 (v. s. sp.) — A very singular plant, allied to E. cauliflorum. The flowers are apparently as large as in E. nutans. The appearance of the plant is that of some Dendrobium.

371. EPIDENDRUM CAULIFLORUM Lindl. in Bot. Reg. 1838. misc. 82. Huc Lindl. l. c. 297. :

E. foliis ovato-oblongis planis acuminatissimis, corymbis brevibus, sepalis angustis patentissimis subaequalibus concavis, petalis linearibus apice cuneatis acutis reflexis, labello cuneato-subrotundo trilobo, lobo intermedio truncato tridentato, lateralibus rotundatis repandis, callis tribus linearibus in medio labelli, lateralibus majoribus.

Wild in Brazil; Rio Janeiro — Loddiges (v. v. c.) — Flowers about the size of those of E. nutans, pale straw-colour, appearing from the side of the stout cylindrical stem bursting forth from among the dry sheaths with which it is closely invested.

372. EPIDENDRUM (Pleuranthium) PILEATUM Rchb. fil. in Bonpl. III. 68.

Affine Epidendro Dendrobii Rchb. fil., foliis lineari-ligulatis acutis, tepalis lineari-ligulatis, labello convexo basi cordato, apice emarginato, corniculis abbreviatis geminis in basi, nervis tribus elevatis per discum.

Caulis bipedalis polyphyllus superne polystachius. Folia quinquepollicaria, apice bene attenuata. Racemi pollicares, basi vaginis cucullatis obtuse acutis vestiti. Bracteae subaequales minores; ovaria pedicellata longe non aequantes. Flores illis Epidendri Dendrobii paulo minores. Sepala ligulata obtuse acuta. Gynostemii pars summa libera assurgens. — Epiphyt. — Grünblüthig. Februar. 5000'. Ocanna. Wagener.

§ 12. *Psilanthemum*. Klotzsch, in Link Klotzsch Otto ic. pl. 2. p. 111.

The radical inflorescence, otherwise unknown in the genus, distinctly marks this section. The lip is adnate to the column, and is similar in structure to Amphiglottium.

373. EPIDENDRUM STAMFORDIANUM Bateman Orch. Mex. and Guat. t. 11. Huc Lindl. l. c. 88.:

E. pseudobulbis fusiformibus, foliis oblongis obtusis coriaceis basi angustatis, racemo radicali paniculato, sepalis patentibus lanceolatis, petalis duplo angustioribus, labelli tripartiti laciniis planis aequilongis, lateralibus oblongis rotundatis intermedia transversa biloba s. emarginata fimbriata.

Epidendrum basilare Klotzsch l. c. t. 45.

Wild in Guatemala, on the coast in shady very moist soil — Skinner; Sa. Martha — Purdie (v. v. c. et s. sp. comm. cel. Hooker). — Flowers in a large branched raceme deliciously fragrant, pale yellow, with a vivid violet spot at the base of the lip.

Huc: *Epidendrum Stamfordianum* var. *pictum* Lem. — Lem. Jard. fl. I. t. tab. 251. — Fl. majorib. viride 5--coloribus, laciniis laetissime aureis purpureo-viridopunctatis, gynostemate basi viride ap. ad sexualia kermesino-lineato, labelli lobis basilarib. niveis (aetate lutescentibus) parce kermesino-punctulatis, apicalib. luteis kermesino-punctulatis. — Patria: Mexico Vera-Cruz. — Bot. Mag. 4659. — Bonpl. II. 20. Caracas. Wagener!

Huc: *Epidendrum cycnostalix* Rchb. fil. (monstrum!) in v. Mohl et v. Schlechtdl. Bot. Ztg. 1852. p. 731. Lindl. l. c. n. 101. :

E. caule fusiformi, folio oblongo acutiusculo valde vernixio, spatha scariosa acuminata abbreviata, pedunculo basi uniramoso plurifloro elongato, bracteis summis tenuissimis, pedicellis subito in ovaria clavata transeuntibus, sepalis lanceolatis acutis apicibus reflexis, petalis angusto-linearibus medio apicem usque dilatatis acutis, columna recurva, labello quadrilobo basi bicarinato lobis lateralibus ligulatis recurvis rètusis medio angustissimo unguiculato bilobo laciniis dolabriformibus denticulatis divaricatis denticulo interposito, clinandrii 5-dentati dentibus infimis reflexis.

Wild in Veragua; Chiriqui — Warscewitz. — Flowers white and brown. — Rchb.

374. EPIDENDRUM WALKERIANUM Rchb. fil. MSS. *Cattleya Walkeriana* Gardner in Hook. Lond. Journ. II. 1843. 662

Foliis oblongo ellipticis coriaceis marginatis obtusis mucronatis caule cylindrico longioribus, sep. oblongo-lanceolatis acutiusculis calloso-apiculatis, petalis ovato-lanceolatis acutis duplo latioribus, labelli 3 lobi cucullati lobis lateralibus apice valde et oblique truncatis basi rotundatis, intermedio late rotundato emarginato edenticulato plano basi ramis elevatis rugosis.

Cattleya Walkeriana Gardn. Herb. Fl. Bras. 5200.

Hab. On the stem of a tree overhanging a small stream, which falls into the Rio San Francisco, beyond the Diamond district, Brazil. — The flowers of this very fine species measure about 4" in diam. Is is nearly related to C. superba (Schomb. in Lindl. Sert. Orch. t. 22), but is readily distinguished by its much shorter pseudobulbs and smaller leaves, by the larger and more rotund middle lobe of the labellum, but particularly by the obliquely truncated lateral lobes, which envelope only the lower half of the broadly winged column, and not the whole of it, as in C. superba. — The specific name will serve to commemorate the services of Mr. Edward Walker, who accompanied me as assistent during the last two years of my travels in Brazil, and by whose activity and intelligence I was enabled to make many additions to my collections, which might otherwise have escaped my notice, of which the present plant is as example.

Huc: *Cattleya bulbosa* Lindl. Bot. Reg. 1847. t. 42.

Caulibus ovalibus brevioribus pseudobulbos referentibus, foliis solitariis ovalibus coriaceis brevioribus; pedunculis unifloris; petalis ovalibus undulatis membranaceis sepalis duplo latioribus; labelli plani calvi lobis lateralibus brevibus rotundatis, intermedio cuneatò bilobo rotundato.

Brasilia. Rucker. — Accords with C. pumila, on its stems resembling pseudobulbs, and its colour, but the flowers are much larger, and the lip flat, not rolled up and crisp. — Differs from C. Aclandiae in its having much larger lat. lobes to the lip, a very differently formed middle lobe, and flowers of quite another colour. — Pescatorea II. 42.

ALTOGETHER DOUBTFUL SPECIES Lindl. l. c. 298—308.

375. EPIDENDRUM VOMERIFORME Swartz Prodr. 124; Fl. Ind. Occ. III. 1541; Willd. n. 25. Huc Lindl. l. c. 298.:

„Caulescens, foliis bulbis innatis carnosis ovato-acuminatis convexis canaliculatis subtus carinatis, scapis e sinu foliorum".

Jamaica — Swartz. Species minima. Flores ignoti (v. s. sp. in hb. Smith).

376. EPIDENDRUM ANGUSTIFOLIUM Swartz Prodr. 123; Fl. Ind. Occ. III. 1512; Willd. n. 26. Huc Lindl. l. c. 299.:

„Folio lineari bulbo innato, scapo paniculato".

Jamaica — Swartz.

377. EPIDENDRUM? TURBINATUM La Llave Nov. Veg. Descr. II. 41. Huc Lindl. l. c. 300.:

„Bulbis oblongo-turbinatis confertis membranis laceratis praecinctis, scapo ex bulbis prodeunte, foliis lineari-lanceolatis coriaceis bulbo adnatis".

Mexico — La Llave.

378. EPIDENDRUM? MAYZIFOLIUM La Llave Nov. Veg. Descr. II. 42. Huc Lindl. l. c. 301.:

„Bulbis fusiformibus pedalibus articulatis, foliis distichis ensiformibus trinerviis".

Mexico — La Llave.

379. EPIDENDRUM CRISTATUM Fl. Peruv. Syst. 243; LO. n. 66. Huc Lindl. l. c. 302.

„Foliis lanceolatis, racemo dependente, labello tripartito lacinia media bifida, lateralibus tripartitis".

Peru; on trees near Pozuzo — Ruiz and Pavon.

380. EPIDENDRUM CORONATUM Fl. Peruv. Syst. 242; LO. n. 65. Huc Lindl. l. c. 303.

„Foliis ovato-lanceolatis, racemis dependentibus, labello trilobo laciniis bifidis intermedia minori".

Peru; on stones and rocks near Pozuzo — Ruiz and Pavon.

381. EPIDENDRUM VIRIDE Fl. Peruv. Syst. 244; LO. n. 67. Huc Lindl. l. c. 308.:

„Foliis lanceolatis acutis, racemo terminali, labii trilobi laciniis lateralibus obcordatis intermedia bifida".

Peru; in groves, on trees in the neighbourhood of Pozuzo — Ruiz and Pavon.

382. EPIDENDRUM VOLUBILE Fl. Peruv. Syst. 247; LO. n. 37. Huc Lindl. l. c. 305.:

„Foliis oblongo-obovatis, ramis volubilibus, labelli bifidi laciniis lanceolatis".

Peru; on precipices at Acobamba — Ruiz and Pavon.

383. EPIDENDRUM LINEARE Fl. Peruv. Syst. 249. LO. 33. Huc Lindl. l. c. 306.:

„Foliis linearibus, racemo terminali subpaniculato, labello obcordato-cuneiformi basi utrinque dentato".

Peru; in groves at Chinchao, Munna, and Huassahuassi — Ruiz and Pavon.

384. EPIDENDRUM FERRUGINEUM Fl. Peruv. Syst. 245; LO. 32. Huc Lindl. l. c. 307.

„Foliis oblongo-lanceolatis emarginatis, racemo simplici erecto, labello acuminato integro".

Peru.

385. EPIDENDRUM CORDATUM Fl. Peruv. Syst. 244. LO. 86. Huc Lindl. l. c. 308.:

„Foliis cordatis amplexicaulibus, panicula flexuosa, labelli bifidi laciniis acuminatis recurvis".

Peru; in the groves and ravines of Chinchao, on trees and rocks — Ruiz and Pavon.

Quid? Certe non Epidendrum. Gard. Chron. 1851. 142. „What is the species of Epidendrum mentioned in a former Chronicle, as figuring at the Horticultural shows in China? In fact, *it is E. chinense* „Hwni-lau-hwa" value of hundred dollars, which is a very sweet and blossoms in winter. What is the particular green var. alluded to?" Dodman.

1371/1. 1378. 1379. 1383. 1385. BLETIA *Rz. Pav.*

A. Corifoliae planifoliae limbo integerrimo.
(Pseudobulbosae pseudobulbis elongatis.)

I. *Lancibracteae:* bracteae ovarii pedicellati dimidium aequantes seu superantes.

* Sepala et tepala plana.

1. BLETIA SUPERBIENS. Huc: *Laelia superbiens* Lindl. B. Reg. XXVI. 1840. Misc. 87.

Scapo longissimo multifloro, sepalis petalisque linearibus oblongis obtusis membranaceis labello longioribus, labelli lobo medio obtusissimo disco lamellis quinque maximis subserratis antice truncatis aucto, antherae crista biaurita; clinandrio denticulato.

Mr. Skinner: „Saw you ever any thing like this!!! This most magnificent of all plants I have sent several times, it is decidedely Epidendrea, but I exspect it will get a new title in Europe. It flowers in Nov. and in some instances bears from 18—20 flowers on stems from 9—12' long!! Mr. Hartweg says he found this plant in great abundance in the state of Quesaltenango, near Chantle, and that he went forty leaguas out of his route to find it, and now he has sent splendid masses of it to England, and at least 30 dried specimens. I have found it most rarely and evidently planted by the Indians before their doors in Acatenango from whence I brought the specimens now sent and in Sumpango, where I found it 12 monthes ago; also from Costa Rica Chantla. Its native habitat is very cold, in fact this plant will require only a green house warmth.

Laelia superbiens Lindl. Bat. Orch. Mex. Guat. 1843. 38: Sumpango planted by the Indians 1839. Barrancos of Sachmarachon ner Comalepe twenty leagues north of Guatemala, immense quantities, finest specimens growing out of crevices of the rocks and sheltered from the north winds. 22" bulbs, flowerstems 4 yards in length and bearing upwards of the 20 flowers 27 Nvb. 184 „Coteach Kiaj of Indians of Comalepa = red flower, and Indians, who speak Spanish: La vera del Sennor San José.

Lindl. in Bentham Pl. Hartw. fasc. 2. p. 92. 1843: *Laelia superbiens* Lndl. Bot. Reg. 1840. Misc. 87.

Scapus 3—9 ped. longus.

In Montibus Malacatan, ubi „Chumagno" dicitur. Mexic. Hartweg

2. BLETIA ANCEPS. Huc: *Laelia anceps* Lindl. B. Reg. XXI. 1835. 1751.

Foliis binis aut solitariis lanceolatis, scapo ancipiti bi- trifloro sqamis carinatis vestito, ovario viscoso, labelli disco lineari elevato apice trilobo, pseudo-bulbis ovatis distantibus tetraquetris.

B. Mag. 1804.

b. Barkeriana Lindl. B. Reg. XXIII. 1837. 1947: sepalis petalisque subaequalibus, labelli lobo medio angusto acutissimo.

Mexico.

3. BLETIA CINNAMOMEA. *Laelia cinnamomea* Rchb. fil. Otto Gtz. 1860. p. 180.

** Tepala, nunc tepala et sepala crispa.

a. Labellum integrum.

4. BLETIA LYONSII. Huc: *Schomburgkia Lyonsii* Lindl. Gardeners Chronicle 1853. 615:

Sepalis petalisque ovatis obtusissimis crispis, labello indiviso conformi unguiculato concavo margine erosulo: costis 5 subaequalibus acutis, anthera bicornuta.

Prettiest S. Flowers pure white, with rich purple spots and speackles. The lip is of nearly the same form as the other parts, but more taper pointed, dull violet with a yellowish edge and rich crimson ribs. The anther is very remarkable for bearing in front a pair of yellow horns curved like those of an ox. Lyons Esq. of Ladiston.

B. Labellum trilobum (cum columna basi connatum).

5. BLETIA MARGINATA. Huc: *Schomburgkia marginata* Lindl. Sect. 1838. 18:

Pseudobulbis clavato fusiformibus, floribus racemosis, bracteis ovario subaequalibus, lavello ovali acuto basi angustato trilobo parum cucullato sepalis petalisque oblongis undulatis subaequali, lamellis crispis 5 continuis, lateralibus interruptis.

Surinam. Demerara. — Formerly in cultivation, but now lost; unless the „Spread Eagle" plant of Jamaica should prove to be it. It differs from S. crispa in its flowers being distinctly purple, with only a little yellow at the edge of the sepals and petals, and in the form and appendages of the lip, which tapers to the base, is very distinctly threelobed, has an acute oval middle lobe, and is furnished with wavy plates, which are broken up at the side.

Abundant near Panamaribo in an avenue of fine trees of Erythrina („Coffee mamma") from being planted among the coffee for the purpose of shade and shelter. Jan. Febr. — 4' high — Likes shade. —

Lond. Journ. II. 1843. p. 641: British Guiana Schomburgk. — Lindl. B. Reg. XXV. 1839. Misc. 12: Mr. Lance brought many plantes of to England 1834. Flowered at length much paler (owing to the dark season) with Thomas Brocklehurst Esq. of the Fence near Macclesfield, who imported it from Surinam.

6. BLETIA CRISPINA. *Schomburgkia crispa* Lindl. Sert. Orch. X. — Bot. R. XXX 1844. sub 23.:

Sepala et petala conformia, patentia, omnino libera, basi aequalia. Labellum difforme, membranaceum, trilobum, semicucullatum, basi cum margine columnae connatum, supra basin tumidum (intrursum): venis lamellatis. Columna alata. Pollinia 8. Rhizoma repens, nudum, annulatum, pseudobulbigerum. Pseudobulbi magni, elongati, 2—3 phylli. Folia coriacea. Scapi terminales vaginati. Bracteae magnae, siccae, spathaceae. Flores speciosi, racemosi, congesti.

Nearly related to Epidendrum: differs by the large spathaceous bracts, membranous lip adhering to the column at only the base, and having below the middle a distinctly marked prominence, which corresponds with an impression on the under side, and by having 8 pollenmasses. In the last I trust to a drawing sent by Mr. Schomburgk.

Huc: *Schomburgkia crispa* Lindl. Sert. t. 10: Scape is terminal, erect, 3' high, hard, stiff, completely covered with pale brown, dry, closely pressed, acuminate scales, carinate at the apex, gradually passing into spathaceous, spreading bracts, which are much narrower, than the scales of the stem, brown, dry, spreading, about 2" long, but shorter than the ovary. Flowers in a dense terminal raceme, spreading, about 2½" in diameter, their stalks and ovary together about two inches long. Sepals and petals bright light yellow, not spotted, linear oblong, acute, excisively crisped and undulated, of nearly the same size, texture, colour. Label pink, with a deeper coloured apex, membranous, a little wrapped round the column, and united to its edges at the base, oblong, threelobed, with a prominence below the middle and the veins crested at the junction of the middlelobe with the side ones; sidelobes nearly flat, middle lobe sessile, transverse, obtuse, very much crisped. Column obovate, much shorter, than the labellum, with a winged margin and having 3 strong veins at its back.

Lond. Journ. 1843. II. 671: *Schomburgkia crispa* Lindl. Sect. t. 10. On the Corenthyn, and more frequently on the Berbice, Schomburgk n. 193.

7. BLETIA GLORIOSA. Huc: *Schomburgkia crispa* Lindl. Bot. Reg. XXX. 1844. 23.

S. crispa. Pseudobulbis fusiformibus, floribus racemosis, bracteis, ovario subaequalibus labello ovato-oblongo obtuso vix cucullato obsolete trilobo, sepalis petalisque oblongis crispis subaequalibus: lamellis 5 undulatis duabusque lateralibus tenuibus rectis.

Demerara. This plant has yellowish brown flowers, with scarcely a trace of purple; and by that circumstance alone it may be distinguished. Its lip is nearly flat, very little three-lobed, and broadest at the base: other characters peculiar to itself. Also the author of the species I must plead guilty to have on one occasion (Bot. R. Misc. Febr. 1839) confounded it with S. marginata and thus misled Sir Wm. Hooker, whose fig. Bot.Mg. 3729 undoubtedly belongs to this spec. Probably the colours in the Sertum, taken from a drawing by Mr. Schomburgk, were much too yellow.

S. marginata var. Hook. B. Mag. 3729.

8. BLETIA ROSEA. Huc: Lindl. Bot. R. XXXI. 1845. sub 53: *Schomburgkia rosea* Linden Herb. 1664. Bot. Reg. XXXI. 1845. sub 53:

Sepalis petalisque oblongis undulatis labello paulo longioribus, labelli subrotundi laciniis lateralibus rotundatis intermedia subrotundata apiculata crispa multo minore, lamellis altis pone basin 4 rectiusculis membranaceis versus apicem 3 brevibus crispis.

„This magnificent species is found on rocks on the northern slope of the Sierra „Nevada de Santa Martha. Bracts, peduncles and lip, are all of a light rose colour „the petals are deep raed. It was met with 5000' above the sea, between the vil- „lages of S. Antonio and S. Miguel an the territory of the Ouruhuaco Indians. Febr. 1144. Nr. 1664. Its lip is very nearly circular in its outline and its lobes are not very different in form, but those at the side are the largest; even when dry it is of the deap colours of the spot.

9. BLETIA UNDULATA. Huc: *Schomburgkia undulata* Lindl. B. Reg. XXX. 1844. Misc. 21.:

Pseudobulbis fusiformibus, floribus dense racemosis, bracteis longissimis spathaceis, sepalis petalisque aequalibus linearibus rotundato-crispis labello longioribus, labelli cucullati lobis lateralibns rotundatis, intermedio ovali acuto v. obtuso, lamellis 5 undulatis duabusque lateralibus, rectis, tenuibus.

From S. crispa and marginata it is distinguished by its very long narrow crisp sepals and petals, the flowers are as large as those of S. tibicinis, but the inflorescence is quite different. There is no yellow in them, and the lip in distinctly curved up towards the column. Some fine specimens have been lately flowered by Mrs. Lawrence, one of which has brown flowers and the middle lobe of the lip wedgeshaped and obtuse, not ovate and acute; but they do not otherwise seem to differ. The very long narrower sepals and petals render this very obviously different from the two last, which it quite resemble in habit. La Guayra. Linden. acc. Rucker. Fine rich brownish purple sepals and petals, and a clear violet purple lip. From S. crispa it differs in having the middle lobe of the lip oval acute, and only 3 ribbed, while the side lobes are much smaller and flatter; from S. marginata with which it corresponds in the form of the lip it is distinguished by its very long narrow crisp petals and sepals. The flowers are as large as those of S. tibicinis, but the inflorescence is quite diff. unless my memory fails me, there is a representation of this plant among Plumier's fig., which I have not just now an opportunity of consulting. Bot. Reg. XXX. 1844. Misc. 21.

Lindl. Orch. Lind. 1846. p. 10. H. 56: On rocks near Pardi, the natural bridge of Icononzo. Petals dull red. New Granada in the province of Bogota, at the height of 2400'. Decb. 1842. 862.

Schomburgkia undulata Lindl. Rb. f. Bpl. III. 21. Selbst die Eingebornen von Venezuela achten die Schönheit dieser imposanten Pflanze: man findet sie auf Mauern gepflanzt, auf Ruinen u. s. w. Wagner.

Rb. f. Bpl. III: 99. Ocanna. Wagener.

II. *Squamibracteae*: bracteae ovarii pedicellati dimidium longe non aequantes.

*Labellum alte columnae adnatum. Columna apicem versus attenuata.

10. BLETIA PERRINII. Huc: Lindl. B. Reg. XXIV. 1838. Tab. 2.: *Cattleya Perrinii* Lindl.:

Foliis oblongis cauli aequalibus, sepalis oblongis linearibus obtusis, lateralibus falcatis petalis obtusis angustioribus, labello oblongo-lanceolato trilobo unguiculato nudo basi in cuniculum ventricosum producto, laciniis lateralibus erectis acutis, intermedia oblonga undulata obtusa elongata sinubus intermediis rectangulis.

Originally sent from the garden of Richard Harrison, Esq. Since I received it from Mr. Bateman, recently from Mr. Knight of the kings Road. Brazil. Not unlike C. labiata. Perigonium roseum, labellum album, purpureo pictum.

Lindl. Bot. Fig. XXVIII. 1842. sub 62.: A plant with club shaped pseudobulbs, and a large green spathe from which the scape makes its appearance; so that it has quite the habit of Cattleya. Flowers are pale lilac with a deep purple tip to the labellum. It would be a Cattleya, if it had not 8 polli.

Bot. Mag. XIII. N. S. 1840. tb. 3711. *Cattleya intermedia* (var. angustifolia):

(γ) Foliis angustioribus, floribus pallide roseis, labelli lobo medio usque ad marginem sanguineo (Tab. nost. 3711. Cattleya Perrinii? Lndl. Bot. Reg. t. 2.)

Brazil, sent to the Glasgow Bot. Gard. under the name of C. crispa. From C. intermedia fig. at t. 2851 the present will be found to differ in no essential particular and we are disposed to consider it a variety of that species, sufficiently distinguished however both from α and β. I am indeed by no means clear about the limits of the species of C.: I mean particularly the large purple kinds resembling the original C. labiata. To me the Genus appears, like so many others of the epiphyte Orchideae subject to great variation in the size and form of the flowers, and the relative length and breadth of the leaves. Perig. roseum, labello kermesino-marginato.

Bot. Reg. XXVIII. 1842. sub t. 62: *Laelia Perrinii* Lindl. — Parad. Vind. fasc. 10.

**Labellum liberum. Columna apicem versus exampliata.

I. Columna apice biauris. Auriculae lobulatae seu sublobulatae,

11. BLETIA PUMILA. Huc: *Cattleya pumila* Hook B. M. 3656 (XII N. Ser). 39:

Pseudobulbis oblongis minutis teretibus sulcatis unifoliatis unifloris, folio oblongo-lanceolato, sepalis oblongis acutis superiori recurvo, petalis ovali-oblongis obtusis undulatis augustioribus; labelli lobo intermedio brevi obtuso undulato-laciniato.

Perigonium lilacinum, labelli apice kermesino. Received from Essequibo by John Allcard Esq. flowered 38.

Cattleya pumila Bot. Reg. XXX. 1844. 5. (C. marginata Hort).

Caulibus brevibus ovalibus sulcatis, foliis solitariis ovato oblongis acutis, pedunculo unifloro, sepalis linearilanceolatis rectis, petalis ovalibus 3plo latioribus, labello obovato indiviso apice plicato, lineis 3 elevatis in medio.

Brazil. (Gardner 657.) — This is said to be from Essequibo, but that appears to be a mistake. It is a very distinct species, with peculiarly thick acute solitary leaves, and deep rose coloured flowers. The lip is bordered with a pale colour, which is some times almost white.

Cattleya Pinellii Hort. Bot. Reg. XXX 1844 sub 5:

Facie C. pumilae, sed sepalis acutis albidis, petalis ovatis roseis, labello magis crispo, columna apice dentibus 2 crenatis aucta. — Brazil. — Very near C. pumila, but the sepals are white, the petals almost exactly ovate, the lip more crisp and of a brighter colour. — Requires further examination.

Lindl. Paxt. Fl. G. I. p. 44. n. 66. = *Cattleya spectabilis* in Florist April (Vol. III. p. 93.) finely blown specimen.

Gardeners Chronicle 1854. 804: The accompanying cut represents a very remarkable monster of Cattleya pumila or marginata, for which we are indebted to Mr. Rucker. The reader will at once observe that the lower flower has wholly lost the lip, which is so characteristic to the genus, in place of which is a flat petal exactly like the two others. The column exhibits no peculiarity. The case in question furnishes another example of the singular tendency which Orchids have to sport from their ordinary condition sometimes assuming forms wholly aliene to their usual nature, but not less irregular; in other cases attempting, as it were, to revert to that regular types of structure to which it is the business of theorists to reduce them. A singular instance occurs in the Dendrobium normale of Griffith, a plant occasionally seen in cultivation, which is also a sport from one of the common yellow Indian Dendrobia, but in that instance the column is also metamorphosed. The loss of the lip was not the only instance of transformation in the Cattleya before us. The other flower had reduced a strong white tooth in the middle of its lip near the point, a circumstance which was owing to one of the three parallel ribs which naturally belong to the lip becoming free. The signification of this will be easily understood by the philosophical botanist.

Laelia pumila Rchb. fil. in Van Houtt. fl. Serres IX. 102.

12. BLETIA GLAUCA. Huc: *Brassavola glauca* Lindl. B. Reg. 1849. Misc. 67.:

Foliis coriaceis, oblongis obtusis planiusculis glaucis, spatha uniflora, sepalis petalisque lineari lanceolatis obtusis herbaceis, labello subsessili subrotundo acuto margine lobato, clinandrio dentato, dente dorsali apice glanduloso.

Mexico. Henchmann. Vera Cruz: sent by Hartweg. Its habit is so much that of a Cattleya, that till it flowered it was exspected to belong to that genus. It however proves to be a Brassavola, with very large flowers. A figure is prepared for Batem. O. of Mexico and Guatemala.

B. Reg. XXVI. 1840. 44.: It is said, that this charming plant was originally found near Xalapa in Mexico by Henchman, and that it was afterwards imported more abundantly by a Frenchman of the name of Deschamps, who brought over a large quantity of Orchids and Cacti for sale.

B. Mag. 4033. — Lindl. in Pl. Hartweg. Fasc. 2. 1842. p. 93.: in loco „Chono" dict. Hartweg. — Bateman Orch. Mex. Qual. t. 16.

13. BLETIA DIGBYANA. Huc: *Brassavola Digbyana* Lindl. Bot. Reg. 1846. t. 53.

Foliis ovalibus planis carnosis glaucis, labello sessili cucullato cordato subtrilobo, margine in crinibus longis soluto, in disco callo maximo aucto, dente postico subulato incumbente.

Honduras, Mrs. Donnell. V. Houtt. Fl. d. Gewch. III. t. 257. — B. Mag. 4474.

2. Columna apice nunc trifida auriculis tum simpliciter acutis.

* Labellum flabellatum.

14. BLETIA FLABELLATA. *Laelia xanthina* Rchb. fil. in Otto Hamb. Blztg.

** Labellum trilobum.

a. Labellum laeve.

15. BLETIA CRISPA. Huc: Bot. Mag. 3910: *Cattleya crispa.*

Caulibus crassis oblongis, clavatis, foliis solitariis, spatha magna herbacea, sepalis lineari-obovato-lanceolatis acutis, petalis latioribus oblongo-lanceolatis, undulatis crispis, labelli indivisi limbo ovato, acuminato quam maxime undulato crispato.

Cattleya crispa. Lindl. B. Reg. t. 1172. Gen. et op. Orch. p. 116. — Brazil Kew 1811. — Seems to have been first introduced to our gardens by Sir Henry Chamberlayne, Bart., 1826.

V. Houtt. IX. 182. *Laelia crispa* Rchb. fil.

Laelia crispa var. reflexa. Bonplandia p. II. 89. Cattleya reflexa Parmentier: eine sehr stattliche Abart, welche anstatt des schwefelgelben Lippengrundes schöne Orangefarbe daselbst zeigt. Catalogue des Collections délaissées par M. Parmentier p. 15. Hier wird Cattleya reflexa macrophylla als Art vindicirt. „Hauptcharacter" „mais elle s'en distingue amplement par la disposition toute spéciale qu'affecte sa hampe florale: ainsi au lieu d'être dressée, elle s'infléchit fortement et avec beaucoup de grâce." — In der Sammlung der Herren Consul Schiller, Kammerrath Frege, Banquier Rothschild.

16. BLETIA PURPURÁTA. Huc: Lindl. in Paxt. Fl. G. 96. et xyl. 1843: *Laelia purpurata*:

Pseudobulbis oblongis, foliis anguste oblongis emarginatis, pedunculis bifloris e spatha erumpentibus, sepalis lineari lanceolatis, petalis oblongo lanceolatis obtusis, labello maximo circa columnam convoluto rotundato lobis lateralibus obsoletis ab intermedio parum diversis.

Island of St. Catherines in Brazil. Near L. grandis, that has the leaf broader at the base, than the point, nankin coloured flowers, white lip washed with rose at the base.

Huc: *Cattleya Brysiana* Ch. Lem.
Lem. jard. fl. III. tab. 275—76.

Pseudobulbis maximis et attenuatis dein ovali-oblongis tereti-compressis laevibus aetate sulcatis, folio maximo lato oblongo coriaceo crasso ap. rotundato emarginato, spatha maxima foliacea ovali oblonga complicata ap. solum oblique aperta; scapo bifloro (aut amplius?). floribus maximis odoratis, laciniis 3 exter. anguste oblongo-lanceolatis acute apiculatis; inter. 2 latissime lanceolatis margine subundulatis omnibus 5 succulentis reflexo-plicatis albis; labello (disco laevissimo) eis aequilongo, lobis lateralibus in tubum supra angustato acutum extus albidum intus luteolum purpureo-venatum, ad apicem violaceo-laetissime jucundissimeque marginatum, conniventibus; lobo terminali patulo etiam violaceo late rotundato crispulo-undulato ap. macula triangulari pallidiore notato interiore venato; gynostemate vix medium tubi labelli attingente. —

C. Brysiana Ch. Lem. sub praes. tab.
Patria: Insula St. Catharina. —

Laelia purpurata. Pescat. tab. 39. — (*Laelia purpurata* var. *praetexta* Rchb. fil. — Otto u. Dietr. Allg. Gtz.: labello apice albo praetexto, melius quam in planta genuina crispato.)

17. BLETIA CASPERIANA. *Laelia Casperiana* Rchb. fil. in C. Koch u. Fintelmann Wochenschrift für Gärtnerei und Pflanzenkunde 1859. p. 136.

18. BLETIA SCHILLERIANA. *Laelia Schilleriana* Rchb. fil. in Otto u. Dietr. Allg. Gtz. 1855. p. 322.

aff. L. crispae Rchb. fil. et L. purpuratae Lindl. Sepalis tepalisque subaequalibus lanceolatis elongatis, labelli trilobi antice hinc parce undulati ac minute denticulati lobis lateralibus obtusangulis, lobo medio oblongo.

Eine Art zwischen Laelia crispa und purpurata, von etwas dickerem Blüthengewebe; grösser und namentlich gestreckter in den Organen als erstere, etwas kleiner als letztere. Die Farbe blendend weiss; am Lippengrund bis zur Mitte ein paar purpurne Nerven, die Scheibe des Mittellappens violett-purpurn, das Zwischenfeld in der Mitte weisslich-gelb. Von Laelia crispa und purpurata namentlich durch die schmaleren Tepala ausgezeichnet; von L. crispa durch den Mangel starker Kräuselung und durch die feine Zähnelung des Mittellappens. Von Rio durch Herrn Consul Schiller eingeführt. Blühte unter Herrn Stanges Kultur kurz darauf. C. Koch Berl. Allg. Gartenztg. 1857. p. 335.

19. BLETIA EUSPATHA. *Laelia euspatha* Rchb. fil. in Otto Hamb. Gtz. 1860. p. 421.

20. BLETIA GRANDIS. *Laelia grandis* Lindl. in Paxt. Fl. G. I. p. 60. n. 91. ic. Xyl. 38.

Caule clavato monophyllo, folio coriaceo basi latiori, pedunculo bifloro basi spathaceo longiore, floribus subhorizontalibus, sepalis lanceolatis reflexis, petalis late lanceolatis denticulato crispis convexis, labello parallelis et paulo longioribus, labello membranaceo venoso nudo undulato trilobo: laciniis lateralibus circa columnam convolutis et multo latioribus.

Bahia. Near to L. Perrinii and majalis. Sepals and petals nankin colour, lip white washed with rose, with purple veins inside.

Van Houtt. Fl. Serres VII. Xyl. 238. Rchb. fil. in Otto u. Dietr. Allg. Gtz. 1855. p. 321.

aff. Laelia Boothianae tepalis cuneato lanceolatis acutis, minute crispulis ac grosse undulatis, quam sepala vix dimidio latioribus, labelli lobis lateralibus acutis erectis, lobo medio oblongo obtuse acuto minute crenulato ac grosse undulato, carina longitudinali per discum, gynostemii lateribus exangulatis, androclinii lobo postico dentiformi, lobis lateralibus obtuse triangulis. Flos telae illius Laeliae crispae.

Bei Herrn Konsul Schiller blühte so eben diese erst heuer über Rio eingeführte Pflanze kultivirt von Herrn Stange (16. September). Abgesehen von zahlreichen weniger wesentlichen Merkmalen finden wir an der Säule und der erhabenen Leiste über der Lippe (beide im Originaltext, der auf eine verwelkte Blüthe begründet scheint, nicht erwähnt) solche Merkmale, dass wir unsere vormalige Laelia grandis purpurea abtrennen müssen. Die Laelia grandis steht im Blüthenschnitt keiner Art so nahe, als der Laelia superbiens. Man nehme breitere Tepala und eine kürzere Lippe; für Tepala und Lippe noch abgesehen von Kerbzähnen Wellenränder nach Art der Dendrobia taurina. Die Blüthe erinnert auf erste Ansicht sehr wenig an die der andern Laelien und die Färbung ist sehr eigen. Die Tepalen hell und nankinfarbig, die Sepalen ebenso, äusserlich rothbraun angehaucht; die Lippe weiss mit Purpuradern. Die Säule mit zahlreichen dunkeln Purpurflecken, nur ein Dritttheil der Lippe erreichend.

21. BLETIA LOBATA. (BLETIA BOOTHIANA). Huc: *Cattleya lobata* Lindl. Gardn. Chronicle 1848. p. 403. c. Xyl. — Paxt. Fl. G. I. p. 6. — G. Chronicle 1852. 184.: „a great rarity." — Laelia virens Hort. — Laelia grandis purpurea Rchb. fil. in Bonplandia 10 April 1854:

Sepala oblongo-lanceolata acuta, basi non angustata, tepala oblonga, medio valde dilatata, apicem versus crenulata, crispula, labelli lobi laterales obtuse rectanguli, antice crispuli, lobus medius ovalis, parce

crenulatus, crispulus, gynostemium breve, medio angulato alatum, alae in dentes obliquos laterales androclinii excurrentes, dens posticus ligulatus inflexus, rostelli processus quadratus porrectus.

Habitus Laeliae crispae. Cultur der Herren J. Booth und Söhne.

Laelia Boothiana Rchb. fil. in Otto u. Dietrich Allg. Gtz. 1855. 322.

aff. Laeliae grandi flore tenuissime membranaceo duplo majori, tepalis cuneato oblongis minute crispis quam sepala duplo latioribus, labelli lobis lateralibus obtusatis, lobo medio oblongo obtuso retuso, omnino crispulo, disco laevi; gynostemio valido utrinque medio acutangulo; androclinii lobo postico crenulato, lobis lateralibus falcatis.

1854 blühte diese bei Herren Booth aus Brasilien eingeführte Pflanze zuerst: sie brachte einen Stiel mit drei Blüthen von dem schönsten Purpur, jede so gross, wie die die einer grossen Cattleya labiata Lindl. Diese stolze Laelia, eine würdige und ebenbürtige Rivalin der Laelia purpurata, widmen wir als Beweis der Hochachtung und Dankbarkeit unserm Freunde, Herrn Lorenz Booth.

22. BLETIA XANTHINA. *Laelia xanthina* Lindl. in Hook B. Mag. 5144.

Obs. Huc pertinebit planta mihi penitus dubia:

Laelia virens Lindl. B. Reg. XXX. 1844. Misc.

Sepalis suberectis ovatis petalisque lanceolatis subaequalibus, labello oblongo obsolete trilobo cucullato apice ovato crispo linea obsoleta elevata versus basin, columnae cardine unidentato.

Brazilian plant, of which I have only seen a single flower. Mr. Loddiges, whose number 647 it is, informs me, that it is quite the habit of Cattleya crispa. The flowers are very pale yellowish green, of no beauty, and about the size of Maxillaria alba which they are smelling like. The number of pollen masses is certainly eight, which makes the plant a Laelia and not a Cattleya.

b. Labellum carinatum. (excl. N. 26.)

23. BLETIA PRAESTANS. *Laelia praestans* Rchb. fil. in K. Koch Berl. Allg. Gtz. 1857. p. 336.

24. BLETIA RUBESCENS. *Laelia rubescens* Lindl. B. Reg. XXVI. 1840. Misc. 25.

Pseudobulbis subrotundis compressis utrinque angulo elevato, foliis oblongis obtusis scapo tereti vaginato brevioribus, racemo multifloro, bracteis pubescentibus ovario plus duplo brevioribus, sepalis linearibus, petalis lanceolatis subundulatis, labello conformi auriculato medio pubescente: lineis duabus elevatis.

Mr. Barker purchased it some time ago from Mr. Joseph Knight, Nursery man in the kings Road. Mexico? Is forms a patch of roundish composed pseudobulbs looking like those of a Maxillaria and bearing each a single broad leaf much shorter than the slender terminal scape. The latter is about a foot long, and bears at its extremity a loose raceme of delicate whitish flowers tinged with pink, and about the size of those of L. albida. The two first flowers which opened with Mr. Barker exhibited a singularly monstruous structure, with only 2 sepals and 2 petals, the lip and one of the sepals being missing; all the other parts were in the usual state.

B. Reg. XXVI. 1840. tb. 41.

Pseudobulbi oblongi, compresse tetragoni, vix sesquiunciam longi. Folium solitarium, coriaceum, oblongum, planiusculum, quasi emarginatum, scapo gracili erecto squamato multo brevius Racemus brevis, multiflorus. Bracteae lineares, marcescentes, ovario plus duplo breviores, carinatae, pilis brevissimis minutissimis fasciculatis pubescentes. Flores L. primulina paulo minores et minus patentes. Sepala linearia, obtusa, pollicaria, basi rubescentia, apice virescentia, recta, petala paululum longiora. Petala

lanceolata, acuta, subundulata, secus margines rubentia. Labellum ovato lanceolatum, versus basin auriculatum, apicem versus undulatum, acutum, medio luteum, et subpubescens, lineis duabus elevatis tertiaque intermedia minus conspicua, basi atropurpurea convolutum.

Most nearly related to the fragrant L. primulina, from which it differs in the form of its pseudobulbs, leaves and labellum, in the size of flowers and in the petals not being at all revolute. In the specific character originally given the bracts were described as pubescent. This appearance arises from the presence of minute patches of extremely delicate hairs, which soon wither up and leave nothing but a stain to indicate their having been present.

Van Houtt. Fl. des Serres VII. tab. 742. Icon optima!

Obs. Quae sit Laelia erubescens Gard. Chronicle 1849. p. 8. ego nescio.

25. BLETIA PEDUNCULARIS. Huc: *Laelia peduncularis.* Lindl. B. Reg. XXXVIII. 1841. Misc. 10.

Pseudobulbis subrotundis compressis linea utrinque elevata, foliis oblongis obtusis scapo tereti vaginato brevioribus, corymbo multifloro, bracteis ovatis abrupte acutis pedunculo pluries brevioribus, petalis oblongis obtusis sublaceris planis, labelli lobis lateralibus rotundatis, intermedio oblongo rotundato plano subrepando (glabro) lineis duabus (2—4) elevatis.

Mexican sp. of great beauty, with the habit of L. rubescens, but with rich violet flowers. Peduncle 1³/₄" long, and the flowers nearly of the same length when closed. The species is very near both L. rubescens and acuminata, but the flowers are much longer in proportion, and the labellum quite round at the point and flat. The pseudobulbs are not at all tetragonous, but compressed with only a slight line in the room of the intermediate angle. Probably it is the same as a supposed var. of L. acuminata mentioned at t. 24. for 1841.

B. Reg. 1845. 69: Diff. a Laelia rubescente et ab acuminata: in its lip having none of the hairiness of that species, and its flowers being much more closely arranged. From the latter in neither its petals nor lip being wavy and sharp pointed. and from both in its very large whole coloured flowers, flat jagged petals, short recurved lip lobes and very long flower stalk. Mexico.

26. BLETIA VIOLACEA. *Laelia violacea* Rchb. fil. in Seemann Bonplandia II. 89.:

aff. L. rubescenti: perigonii tenuis phyllis L. cinnabarinae, labello L. rubescentis, carinis tamen in disco nullis. —

Pseudobulbi compressi orbiculares ancipites apice humerati seu subtetragoni. Folium solitarium valde coriaceum a basi cuneata oblongum apice angustata bilobulum, ante apicem sulculis transversis numerosis insculptis incisum. Pedunculus multivaginatus tantum apice racemosus. Bracteae lanceolatae acutae nervosae scariosae tertiam ovarii pedicellati aequantes. Sepala ac tepala subcarnosa lineariligulata, tepala vix latiora, labellum ligulatum apice paulo angustatum, basi utrinque semirhombeo auriculatum, antice 3—4sinuato dentatum, disco laeve. Gynostemium apice tridentatum, fovea quadrata in sinum aperte triangulum media basi excurrens. — Blüthen lila, auf den seitlichen Hüllblättern auf unterer Hälfte ein dunkelvioletter Streif; eben so ist die Scheibe der Lippe gefärbt. — In Hofrath Keil's Garten zu Leipzig von Herrn Tube cultivirt.

Huc videtur pertinere: Laelia acuminata Hook B. M. 4905.

*** Labellum trifidum.

a. Labellum laeve.

27. BLETIA IRRORATA. *Laelia irrorata* Rchb. fil. in Otto Hamb. Garten- und Blumenzeitung 1859. XV. p. 57. N. 51.

28. BLETIA ELEGANS. Huc: *Cattleya elegans* Morr. Ann. Gand. 185. — Hook. B. Mag 4700:

Pseudobulbis teretibus, cauliformibus elongatis (clavatis), folia solitaria (v. folia gemina) lineari oblonga coriacea gerentibus, sepalis oblongis acutis, petalis lanceolatis acutis, labelli trilobi lobis lateralibus elongatis obtusis columnam involventibus, intermedio apice latissimo transverso subunguiculato vix emarginato undulato crispato basi laeviusculo (venis callisque deficientibus).

Lindl. in Paxt. Fl. G. I. p. 6. St. Catherines, Brazil. Flowers large, rose colour with a deep purple violet lip. Very like Catt. superba, except in colours, but the leaves are represented as being much narrower, and the lip is said not to have either wrinkled veins or callosities. Unknown to me except from Prof. Morren's figure made from a Belgian specimen in the possession of M. Alexander Vershaffelt.

Lindl. Gard. Chronicle 1852. Very rare. Flowered just with Mrs. Lawrence. It has long slender clavate terete stems, each bearing one very long obtuse leaf. The flowers grow in pairs or perhaps in greatea number, from within a green spathe, which in B. M. is represented as long as the peduncle, but in the specimen before us, it is scarcely more than rudimentary. Sepals and petals of clair vivid uniform rose colour with expansion of about 5 inches: latter being about twice as broad as the former. Lip is cucullate, regularly 3lobed, with some elevated lines along the middle; its convolute part is almost colourless; the ends of lat. lobes, which are very much rounded and deeply separated from the middle one, have a broad rich crimson stain within the edges. The middle lobe is somewhat cordate, with a wedgeshaped base, wavy, broader than long, exactly as is the lower fig. in B. M. Blossoms, have an agreeable odour. St. Catherine. We must add, that this too is a Laelia, if the mere number of pollenmasses definitively separate the genera Cattleya and Laelia. Pollen-masses athough 8, are of unequal size in this species, but 4 are quite small and lodged in very shallow sockets in front of anther. Pescatorea tab. 23. *Laelia elegans* Rchb. fil. in Otto u. Dietrich Allg. Ztg. 1855. p. 242.

29. BLETIA ACUMINATA. Huc: *Laelia acuminata* Lindl. B. Reg. 1841. XXVIII. Misc. 42:

Pseudobulbis ovatis compressis, rugosis, scapo erecto, foliis solitariis emarginatis brevioribus, floribus corymbosis, bracteis linearibus acuminatis ovario duplo brevioribus, sepalis linearibus petalisque lanceolatis undulatis acuminatis, labelli lobis lateralibus rotundatis, intermedio lanceolato undulato acuminato.

Guatemala Hartweg. Very near L. rubescens, from which it differs in the scape being two flowered, not racemose, in the sepals being acuminate, and the flowers at least twice as large. It is a pretty species, with pale blush flowers. What seems to be a variety, from Costarica no. 620 has produced a pair of pale violet blossoms with Mrs. Loddiges.

B. Reg. XXVII. 1841. 24. It forms a fine corymbe of 8 flowers. — Decb. in Guatemala. Hartweg. From L. rubescens its nearest ally it differs in its large, wrinkled pseudobulbs, larger and more corymbose flowers and the different form of the labellum. — Perigonium albido roseum, labelli lobo medio flavo striato, labelli fundo kermesino. — Lindl. in Benth. Plant. Hartweg. 2. p. 93. Retalule in Crescentia Cujete. Vernacule „Flor de Jesus" dicta. Mexico. Hartweg.

b. Labellum carinatum.

§. Labelli lobi postici laterales.

∞. Uniflorae seu spicatae.

30. BLETIA AUTUMNALIS. La Llave and Lexarz a Nov. Veg. Descr. II. 19. *Laelia autumnalis* Lindl. Gen. et Sp. Orch. 115. Batem. Orch. Mexic. et Guat. t. 9. „Flor de los Santos." Lindl. B. Reg. 39. t. 27. Hook. B. Mag. 42. tb. 3847.

Pseudobulbis ovatis teretibus costatis apice attenuatis 2—3phyllis; foliis oblongo linearibus patentissimis, scapo multo brevioribus; scapo tereti apice subsexfloro, bracteis oblongis membranaceis acutis, sepalis lanceolatis acuminatis patentissimis, petalis oblongo lanceolatis undulatis, labelli trilobi bilamellati lobis lateralibus erectis rotundatis truncatis, intermedio oblongo-lanceolato apice reflexo, ovario glabro.

31. BLETIA FURFURACEA. *Laelia furfuracea* Lindl. B. Reg. XXV. 1839. 26.

Pseudobulbis ovatis striatis submonophyllis, foliis anguste oblongis membranaceis acutis, scapo unifloro(?) tereti, bracteis oblongis membranaceis acutis, sepalis lanceolatis acuminatis patentissimis, petalis subrhombeis lanceolatis undulatis sublobatis, labelli trilobi bilamellati lobis lateralibus erectis rotundatis truncatis, intermedio oblongo revoluto, ovario glandulis nigris furfuraceo.

Mexico. Woburn Garden. received through Parkinson. Perig. roseum albidumque, labelli lobi lat. albidis, intus albidi, medium labellum flavum, lob. anterior roseus.

B. Mag. 42. 3810. Was found near Oaxaca by Count Karwinski and is probably not uncommon in coll. large quantities having been received by various persons from Mexico. A and B. are variet.

Perigonium roseum, labelli lobis lateralibus intus albis, cristulae labii flavae.

Differt ab autumnali: its pseudobulbs are ovate and slightly furrowed, instead of having a long neck and being deeply furrowed. The leaves solitary or in pairs and not in sor 3, erect and straight, not spreading and curved; flowers have little or nothing as to appea rlobed, and finally the ovary is closely covered with black mealy glands.

33. BLETIA SPECIOSA. Hb. B. Kth. n. Gen. et. Sp. I. 342. Lindl. B. Reg. 1839. Misc. 42.

Laelia majalis Lindl. mss. *Cattleya Grahami* LO. 116. Flor de Mayo of the natives of San Bartolo. and the adjoining parts of Mexico, has lately been received by the Hort. Sc. of London from Mr. Hartweg. who found it on the mountains, near Leon 8000′ where it sometimes freezes. I possess sp. (No. 3) given me by Prof. Schlechtendahl, gathered by Dr. Schiede in the same situations. It is one of the most beautiful of the whole order; a dried flower now before me, of a bright violet colour, measures nearly 5″ from the tip of one petal to that of another, and when fresh I have no doubt the expansion of the flowers was 6″. The labellum 2½″ long. Many plants have been given away by the Hort. Soc., but it proves exceedingly difficult of cultivation.

B. Reg. XXX. 1844. 30.

Folio angusto scapo bifloro aequali, bracteis membranaceis ovatis, sepalis lanceolatis, petalis oblongo-lanceolatis duplo latioribus, labelli lobo medio rotundato emarginato plano, lateralibus parvis obtusis.

The labellum is dotted and veined with rich purple.

Batem. M. G. 23. B. Reg. XXVIII. 1842. sub 62.

Pseudobulbi ovati vel subrotundi macrophylli.

Bat. 33. 1840.

33. BLETIA ALBIDA. Huc: *Laelia albida* Bat. B. Reg. 1839. XXV. Misc. 4.

Pseudobulbis ovalibus diphyllis, foliis linearibus acutis spica multiflora quadruplo brevioribus, sepalis oblongo-lanceolatis acutis vel subacuminatis, petalis latioribus acutis, omnibus apicibus reflexis fortiter mucronulatis, labelli alte trilobi tricostati lobis lateralibus erectis rotundatis, intermedio duplo majore subrotundo obscure apiculato reflexo.

Bot. Mag. 1842. 3957.

Mexico out from Oaxaca by Count Karwinski. Mr. Harris purchased it of a French collector. Kew.

B. Reg. 1839. XXV. 54:

Pseudobulbi ovati, sulcati, diphylli. Folia anguste lanceolata, erecto-patula, scapo breviora. Racemus erectus, 3—5florus. Bracteae ovatae, durae, obtusae, sessiles, nanae. Sepala candida, apice rosea, oblonga, lanceolata, patula. Petala breviora, oblonga, obtusiora, revoluta, concolora. Labellum obovatum, trilobum, 3 lamellatum: laciniis lateralibus obtusis, intermedia obtusa apiculata undulata rubescente multo brevioribus; lamellae labelli luteae purpureo punctatae. Columna elongata glabra. Oaxaca.

B. Reg. XXVII. 1841. Misc. 21.:

Mr. Barker communicated a curious monster of this pretty plant, with the dorsal sepal united to the back of the column by means of a thin plate resembling a small knifeblade. What is very singular: every flower of the specimen was in the same state.

B. Reg. XXIX. 1843. Misc. 16.:

A beautiful variety of this with a violet lip, painted at the base with purple veins, has flowered with Lawrence at Ealing Park.

Huc: *Laelia discolor* A. Rich. u. Gal. Ann. sc. nat. 1845. Jan. p. 23:

Scapo terminali floribus sordide roseis racemosis: labello purpureo 3-lobo, lobis lateralibus oblongis, intermedio suborbiculari obtuso margine sinuoso crispo in disco lamellis luteis notato. Mexico.

∞ ∞. Vulgo paniculatae.

14. BLETIA TIBICINIS. Huc: *Epidendrum tibicinis* Batem. Mag. B. Reg. XXIV. 1838. Misc. 12.

Caulibus cylindraceis 3—4phyllis, foliis ovatis crassissimis triplo longioribus, scapo altissimo giganteo in racemum multiflorum desinente, floribus —.

Hab. in Honduras Skinner. By far the most magnificent species of the genus. Flowers of the size of Cattleya labiata, but I have not the means of giving their specific character. Scape 8 yards long. The hollow cylindrical stems are used as trumpets by the native children: hence the name.

B. Reg. 1844. sub 23.: *Schomburgkia tibicinis* Bat.: Its pseudobulbs between one and two feet long, are quite hollow, and as smooth inside as the outside of a Bamboo; at their base there is always a small hole, which leads to the interior, and furnishes access to colonies of ants, which are constantly found inhabiting the plant.

B. Reg. XXVII. 1841. Misc. 119.:

Schomburgkia tibicinis Batem. in litt. Pseudobulbis conicis cornuformibus annulis sulcatis 3 phyllis, (1 — 1½ — 2'), foliis oblongis coriaceis patentibus, scapo — 10' longissimo tereti distanter squamato apice paniculato, panicula pyramidali laxiflora, sepalis petalisque undulatis crispis, labello oblongo venis per medium elevatis approximatis: laciniis lateralibus apice rotundatis, intermedia subrhombea emarginata.

The cow-horn orchis of Honduras is sent by Skinner. Lady Acland brought flowers. The flowers (exhib. at. Hort. Soc.) when fully expanded are about 2½" wide, a deep pink speckled with white on their outside, rich chocolate red within. The lip is white in the middle, but deep rose colour at the side, with a short chocolate red middle lobe. Flowering stem 8—9' long!!

Bat. Orch. Mex. Gua[illegible] 1841. 130.: Flowers 2½" across. Sepals and petals dark chesnut brown inside, and dirty purple outside. Lip whole of the inside white with

the exception of the edges, which are pencilled with crimson, and five elevated yellow ridges. Column whitish brown tipped with an emerging anther. Honduras and rarer in Oaxaca and Caracas. Bat. 30. 1841.

Schomburgkia tibicinis var. *grandiflora* Lindl. B. Reg.: XXXI. 1845. 30.:

Floribus duplo majoribus, labello extus pallido intus lobo medio luteo, albo vel. violaceo limbate.

Ead. Hook. B. M. 4476: Dr. Lindley considers it a variety, but it would be perhaps more correct to consider it the perfect state of the plant, such as it assumes in its native woods.

Huc: *Schomburgkia Galeottiana.* A. Rich. Galeotti in Annales des sciences naturelles 1845. Jan. p. 23.:

Sepalis externis planis, non undulatis: labello obsolete 3-lobo, lobo medio apice fisso. Mexico.

35. BLETIA HUMBOLDTI. Huc: *Epidendrum Humboldti* Rchb. fil. in Linn. XXII. p. 386. Lindl. Folia Orch. Epid. N. 80.:

„E. sepalis oblongis acutis basi aliquid cuneatis, petalis obtusis basi valde cuneatis sub apice dilatatis, labello maximo trilobo basi ima cuneato, lobis lateralibus integris obtusatis medio maximo subquadrato antice emarginato denticulato nervis 7 medianis elevatis a basi ad centrum cristatis serratis, columna postice carinata, clinandrio tridentato interjecto dente antice rostellari.

Wild in the Caracas: Porto Cabello. Humboldt u. Bonpland.

Epidendrum (*Encyclium*) *Humboldti* Rchb. fil. in Bonplandia II. 19.

Es ist kein geringes Verdienst unseres Wagener, diese von Humboldt entdeckte Art wieder aufgefunden zu haben. Ich fand im Berliner Herbar ein paar Blüthen vor ohne Axe, die unter unbestimmten Arten der Untersuchung harrten. Selbst diese alten Blüthen vermochten mir eine Ahnung einzuflössen, dass diese Art werth wäre, den Namen ihres Entdeckers zu führen. Allein auf eine solche Pracht war ich nicht gefasst. Denke man sich eine unzählige Masse Blüthen der Laelia pumila, (Cattleya p. Hook.), aber mit den edlern Farbentönen der Laelia anceps — mit der Gestalt der Blüthen des Ep. atropurpureum — vereint diese in eine pyramidale Rispe — so hat man Epidendrum Humboldti. Die Anthere ist zweihörnig. — Die Pollinia sah ich nicht. Das Perigon ist weit gespreizt, die Lippe umrollt die Säule, der prächtige feingezähnelte quere, vorn ausgerandete Mittellappen derselben steht vor.

Obs. Quaenam sit sequens, nescio:

Schomburgkia violacea Paxt. Mag. XVI. 123. Scape 5, length, a large trup ot dark violet flowers, sepals and petals much crisped.

§ §. Labelli lobi postici antrorsi.

35. BLETIA CINNABARINA. Huc: *Laelia cinnabarina* Bat. in Sert. Orch. t. 28.:

Pseudobulbis cylindraceo-ampullaceis elongatis, foliis binis basi discretis oblongis subrecurvis et undulatis, scapo tenui ascendente foliis multo longiore 4—5 floro, sepalis petalisque oblongo linearibus obtusis aequalibus, labelli oblongi convoluti recurvi lobis lateralibus acutis, intermedio ovali crispato, lineis 3 elevatis in axi.

Brazil. — Flowers rich orange colour.

B. Reg. XXVIII. 1842. sub. 62.

Pseudobulbs 4—5″, thickest at the base, tapering upwards. Leaves about as long as the pseudobulb. Scape 1′ or more, slender, green, scales; bracts very small. At the base of the labellum is a passage passing down the side the ovary and indi-

cating, that the labellum is really calcarate, but that its spur is adherent to the flower stalkes as in Pelargonium. The mouth of its spur is shown at fig. 2.
B. Mag. t. 4302.

37. BLETIA FLAVA. *Laelia flava* Lindl. B. Reg. 1839. Misc. 143.:

Pseudobulbis ovalibus 1—2phyllis, foliis carnosis coriaceis planis subconvexis brevioribus, scapo erecto foliis longiore squamulis quibusdam distantibus vaginato apice paucifloro, bracteis minimis acutis, sepalis petalisque oblongo-linearibus obtusis, labelli lobo medio crispo recurvo, lateralibus obtusis undulatis multo longiore.

I believe a native of Mexico. Charles Lemon's Coll. at Carclew. Flowered 39 Flowers bright yellow.

Lindl. B. Reg. XXVIII. 1842. 62: Nearly allied to L. cinnabarina, but it appears to be of a smaller size, with much more coriaceous leaves; the flowers are a clear pure yellow, and not a brillant cinnabar colour, and the lateral lobes of the lip are obtuse not acute.

Huc: *Laelia caulescens* Lindl. B. Reg. 1841. sub t. 1.

Not of Mexico!!! Serra de Piedade Prov. Minas Geraes Martius. Rocky places coll. in the Serra do Frio District Brasil.

38. BLETIA CAULESCENS. *Laelia caulescens* Lindl. B. Reg. XXVII. 1841. sub 1.

Folio coriaceo lineari-oblongo caule tereti longiore, scapo subdecemfloro, bracteis squamaeformibus erectis rigidis striatis, sepalis petalisque subaequalibus lineari-lanceolato acutis, labelli postici nudi lobo intermedio obtuso crispo, lateralibus parum longiore.

A species near L. cinnabarina. The flowers are apparently purple, and about the size of L. rubescens. The lip is perfectly destitute of all elevation or inequality. In the herbar of von Martius is a smaller plant ;from the same loc., with a three flowered raceme, and much shorter leaves; (app. it is a mere variety. From the Serra de Piedade in the prov. of the Minas Geraes in Brazil. (Herb. Martius).

39. BLETIA RUPESTRIS. *Laelia rupestris* Lindl. B. Reg. XXVIII. 1842. sub 62.

Pseudobulbo elongato monophyllo, folio oblongo erecto canaliculato, scapo racemoso multifloro breviore, sepalis petalisque oblongis acutis, labelli circularis lobo intermedio obtuso margine crispo disco plano lateralibus obtusis, lineis elevatis rectis. Brazil.

Found by Prof. Gardner in elevated rocky tracts in the Diamond District. „Flowers violet". Very near L. flava.

40. BLETIA WENDLANDI. *Laelia Wendlandi* Rchb. fil. in litt.:

„Pseudobulbo Bletiae ancipitis", foliis cuneato oblongis obtuse acutis, panicula pluriflora, ramis abbreviatis, sqamis triangulis quam ovarii pedicellata multo brevioribus, perigonio subcoriaceo illi Laeliae cinnabarinae aequali, sepalis petalisque ligulatis obtuse acutis, labelli trifidi laciniis lateralibus triangulis obtusatis antrorsis, lacinia media obovata crispula denticulata, lineis per discum ad apicem ternis, paulo incrassatis, media apice undulata, columna basi late alato dilatata, anthera biapiculata. — Guatemala. Wendland.

B. Corifoliae planifoliae limbo serrulato.

41. BLETIA LINDENI. Huc: *Laelia Lindenii* Lindl. in Orch. Linden.

Scapo gracili tereti apice 4—10 floro, sepalis ovalibus acutis, petalis oblongis obtusis, labello multo majore obovato, subrotundo, bilobo, venis omnibus infra medium dentatis, columna basi bidentata.

Cuba. Jun.

This charming species grows on single trees in the Savannah, between San Andres and the Saltadero. The flowers are large, pale rose colour, the pseudobulbs are small and compressed; the leaves are fleshy, lanceolate, toothed. (N. 1805).

This is probably the same as Cattleya? domingensis. I have not seen the leaves.

Huc: *Laelia Lindenii* Lindl. Ramon de Sagra hist. Cul. tab. 82.

42. BLETIA DOMINGENSIS. *Cattleya domingensis* LO. 11. B. Reg. XXX. 1844. sub 5.

Caule brevi oblongo annulato squamoso, folio ovali-oblongo coriaceo, scapo terminali longissimo striolo apice racemoso 7—8 floro, sepalis lineari-lanceolatis acutis, petalis oblongis obtusiusculis triplo angustioribus, labello indiviso obovato obtuso plicato crispo emarginato cucullato.

St. Domingo.

In the absence of sufficient evidence, as to the species, which is No. 281. of Jaegers coll. it may be conjectured to be a Laelia rather than a Cattleya. It is found on longwood trees is the wood near Miragoane in St. Domingo, flor. April.

Laeliopsis Lindl. in Paxt. Fl. G. III. 105.:

Omnino Cattleya, nisi quod flores membranacei, nec non venae labelli barbatae.

L. Domingensis: pseudobulbis 2 phyllis, foliis oblongis coriaceis obtusis, scapo gracili nudo apice sub 8floro, labelli 2 lobi laciniis denticulatis undulatis recurvis, venis centralibus barbatis.

Cattleya domingensis LO. 118. — Broughthonia lilacina Henfrey Gard. Mag. Bot. Vol. III. p. 201. with a fig.

Laelia? no — because it has 4 pollenmasses. Broughtonia? no, for through its flower is deeply cuniculate, yet it has not a long external adnate spur and decurved sepals. Epidendrum? — no, for it wants the unguiculate lip more or less adnate to the column. Cattleya? still no, alhough we once thought it one; for the flowers are membranous, the veins of the lip beerded, and the habit quite different. We see no meens of providing a fixed station for this and a few allied plants, except by giving them a genus to themselves, the essential features of which shall consist in what has been above proposed. There is no doubt that Cattleya, Epidendrum, Broughthonia are so very nearly related, that on more technical grounds they might be all placed in the same genera, but their habits are very different and the mind is unable to reconcile itself to their union. As to Broughtonia, is, we disregard its cuculiate lip and manifest external adnate spur, there is little to divide it from Epidendrum, the majority of whose species have a cuniculate ovary, and in the case of E. vesicatum even a spur partially visible; or from Cattleya except the tough coriaceous equality of the lip and the adhesion of the sepals of Broughtonia to the face of its external spur. Upon grounds of the same nature as those, which separate those general must Laeliopis be sustained. when the mutual difference among the 4 genera may be tabulated thus:

Labellum calcaratum sepalis calcari adnatis . . . . . *Brougthonia*
calcaratum cuniculatum tantum unguiculatum
ungue saepissime columnae adnato. . . . . *Epidendrum*
sessile convolutum,
coriaceum imberbe . . . . *Cattleya*
membranaceum barbatum . . . . *Laeliopis*

L. will receive L. Lindenii, Broughtonia chinensis, Epidendrum cubense. — Mackenzie, — near Miragoane. Jaeger.

Obs. Haec omnia pulchre dicta. Sed pollinia adsunt octona. Rchb. fil.

43. BLETIA ORTGIESIANA Rch. fil. in Otto Hamb. Gartenzg. 1860. p. 420.

Sectionem C. cum E. combinandam judicavi, ob difficultatem judicandi folia „Brassavolarum" ex nodosae affinitate ad icones Anglorum.

Ego excepta una B. venosa, quae et nobis folia fert planiuscula, saltem transsectione semilunari, semper alias reperi foliis teretiusculis sulcatis. Sed Anglorum icones recedunt. Putavi olim folia adulta fieri planiora — num recte?

D. *Vomerifoliae*: folio triquetro. Pseudobulbosae.

44. BLETIA PUMILIO. Huc: *Brassavola Pumilio* Rchb. fil. Linnaea XVIII. p. 418.

Rhizomate repente pseudobulbifero, pseudobulbis minimis, oblongis, unifoliis(?), foliis coriaceis oblongis obtuse acutis, scapis unifloris ex spathis pusillis membranaceis erumpentibus, vaginatis, bracteis vaginatis membranaceis pedicello aequalibus, sepalis petalisque aequalibus lanceolatis cuspidatis ovario aequalibus, labello oblongo-cordato acuminato, gynostemio brevi, androclinio integre alato. —

Ich kenne von dieser niedlichen Pflanze blos ein Exemplar in der Sammlung des Hrn. v. Römer. Die Trugknollen sind 2‴, die Blätter 5‴, der haarfeine Schaft 7‴, die Kelchblätter 5—6‴, die Lippe 5‴, die Säule 1½‴ lang. — Da die Blätter alle abgefallen sind, kann ich nicht bestimmen, ob die Trugknollen ein- oder zweiblättrig sind. Die Blüthe scheint weiss gewesen zu sein, an der Basis der Lippe zeigt sich ein dunkler Fleck. Die Anthere ist 4fächrig, die 2 hinteren Fächer sind deutlich 2fächrig, an den vorderen kann ich dieses nicht deutlich wahrnehmen. — Tropisches Mexiko. Leibold.

Nunc ipse habeo bona specimina Schaffneriana.

C. et E. *Cepulifoliae*. Folia seu teretiuscula seu teretiuscula applanata.

a a. Labellum fimbriatum.

45. BLETIA CUCULLATA. Huc: *Brassavola cucullata* Br. Kew. Ed. 2. Vol. V. 216. Lindl. Journ. Hort. Soc. V. 85. c. Xyl.

This cut represents a flower of what I believe to be B. cucullata, almost lost in English gardens. It is pure white and remarkable for the manner in which its long tail-like lip and other floral divisions fall to one side as soon as they are disengaged from each other in the bud. In the foliage there is nothing to distinguish the plant from several other species. If the old fig. of Bot. M. 543 is to be trusted the lip must be subject to some variation in form; but we have no plant now in cultivation, which corresponds with that figure, nor has such a plant been marked in herbaria.

Var. cuspidata. Huc: *Brassavola cuspidata* Hook. B. Mag. XIII. N. S. 3722.

Caule unifloro, labello trilobo, lobis lateralibus rotundatis parce fimbriato-dentatis, intermedio longissimo cuspidato subuliformi integerrimo, sepalis petalisque longe acuminatis.

John Moss. Esq. of Otterspool Liverpool. Trinidad. sent by Robert Esq. Most nearly allied to B. cucullata Br. (Epidendr. cucullat. B. M. 543.) That species however has the middle lobe of the lip much broader at the base and deeply fimbriated for the general part of its length, having the apex alone entire. In our plant the lobe in question is subulate and almost quite entire.

Perigonium candidum flaveolo (labellum) et roseo (laciniae perigonii) adspersum.

Huc: *Brassavola appendiculata*. Rich. et Gal. tab. 21. Ann. sc. nat. 1845. p. 23.

Caule erecto, apice 1-phyllo; fol. subtereti subulato, sulcato; floribus solitariis maximis pallide-luteolis; sepalis lineari-lanceolatis, labello subcordiformi margine denticulato apice in ligulam linearem acutam desinenti. Mexico.

Huc: *Brassavola odoratissima* Regel Gartenflora tab. XXXIII.
Rchb. fil. Bpl. II. 21. Caracas. 100'. Juli. Wagner.

46. BLETIA MARTIANA. Huc: *Brasavola Martiana* Lindl. B. Reg. XXII. 1836. sub 1914. B. Reg. XXV. 1839. 5.

Labello ovali (aut ovato) acuminato ciliato-dentato sessili; petalis sepalisque linearilanceolatis acuminatis longioribus, clinandrio cucullato inciso. B. Reg. fol. 1914. in textu.

Folia longa, teretia, supra sulcis tribus exarata, racemo subcorymboso duplo longiora. Pedunculi laeves, teretes, sepalis longiores, pone basin fusco-purpureo tincti. Sepala et petala lineari-lanceolata subaequalia, patula. Labellum ovatum aut ovale, acuminatum, fimbriatum, basi luteum; ungue brevi columnae appresso. Columna apice cucullata, inflexa, fimbriata. (Perigonii foliola viridia).

Berbice imp. Loddiges. Originally discovered by Dr. Von Martius on the barks of the Rio Negro in Brazil.

47. BLETIA AMAZONICA. Huc: *Brasavola amazonica*. Pöpp. Endl. — Lindl. B. Reg. XXV. 1839. sub 5.

Beyond the reach of ordinary travellers occupying the branches of trees surrounding lake „Egan", one of the offsprings of the Amazons.

48. BLETIA ANGUSTATA. Huc: *Brasavola angustata* Lindl. B. Reg. 1838. XXIV. Misc. 6.

Sepalis petalisque linearibus acuminatissimis collo ovarii longioribus, labello ovato acuminato serrulato basi haud cucullato, clinandrii trilobi lobo medio incurvo integro, lateralibus cuneatis flabellatis incisis.

A fine new species imported from Demarara, by Wilmore Esq. of Oldford near Birmingham. The flowers are large and long-stalked, of a pale yellowish green, with a narrow fringed white lip. It differs from B. cucullata in the lip not being at all cucullate at the base. The leaves are very long and slender.

Huc: *Brassavola surinamensis* Focke is Tijdschrift v. d. naatuurk. Wetenschappen. 4. p. 71.

Foliis teretibus subuliformibus articulato-petiolatis unisulcatis, sepalis et petalis aristato-attenuatis, labello oblongo-cordato acuminato recurvo fimbriato, clinandrii dentibus lateralibus laceratis, postico integro acuto procumbente, spicâ laxâ paucíflorâ in axilla folii eoque multo breviore.

Rhizoma annulatum, repens. Radices crassae, albidae. Folium pedale, carnosum, teres, subuliforme, mucronatum, articulato-petiolatum, uno latere sulcatum, vaginatum. Spica axillaris, 3—5-flora, folio multo brevior, nutans. Perianthium patens. Sepala et petala libera, aequilonga, aristato-attenuata, pallide viridia, 4 centim. longa. Sep. lateralia subfalcata approximata; superius erectum, basi convexum, apice obliquo-recurvum. Petala paullo angustiora, planiuscula, deorsum incurva. Labellum basi cucullatum, unguiculatum, ungue basi columnae adnato, oblongo-cordatum, acuminatissimum, limbi basi columnam amplectens, toto margine fimbriatum, subrepandum, apice recurvum, album, disco luteo, inde a basi callo longitudinali infra limbi medium evanescente instructo, 3 centim. longum. Columna cum ovario continua, marginata, concava, alba, clinandrio antice biaurito, postice dentibus tribus instructo, quorum 2 laterales lacerato-fimbriati, erecti, intermedio integro acuto procumbente, centim. longa. Anthera terminalis, subglobosa, emarginata, 4-locularis, septis marginatis. Pollinia 8, quorum 4 minora ovata, 4 majora compressa, cultriformia, lutea.

Candiculae 4 elasticae, parallelae, quaevis utrinque polliniorum minus atque majus gerens, luteae; interdum tuberculis minutis, polliniis similibus, obsessae. Ovarium decimetri fere longitudine, teres, glabrum viride, basi atro-purpurascens, bracteâ minutâ suffultum. Herba epiphyta, caespitosa, pendula in arboribus ad rivum Para. Floret Martio et Aprili. Flores speciosi odorem gratum caryophyllatum exhalant. Tubercula polliniis accessoria, quae memorat cel. Lindley, quippe reddita in icone Hookeriana B. tuberculatae, in nostrâ quoque specie occurrunt. —

Dedi Paramariboae, 28. Juli 1850.

805. *Brassavola sp. perhaps* B. angustata Lindl. Lond. Journ. II. 1843. p. 672. But the spec. too imperf. to determine: British Guiana Schomburgk. n. 428.

bb. Labellum integerrimum.

α. Columnae auriculae anticae retusae.

49. BLETIA TUBERCULATA. Huc: *Brassavola tuberculata* Hook. B. Mag. Vol. III. N. S. 1829. t. 878.

Antonio Musa Brassavol a Physician of Ferrara, who published many works in the 16 th. cent on the properties of plants as employed in medicine.

Caule unifloro, lamina labelli integra, pedunculo petalis exterioribus tuberculatis, labello candido medio basique flaveolo, phyllis reliquis perigonii luteis, sepalis bruneo maculatis.

Botafogo Bay found by Henry Harrrisen Esq. sent to Rich. Harr. of Aigburgh near Liverpool.

Huc: *B. tuberculata* Hook. Rchb. fil. Bpl. III. 221.

Diese Pflanze, die in Herbarien sehr häufig, in Gärten bisweilen vorkommt, haben wir nur einmal mit einigen Wärzchen, gewöhnlich aber ohne alle dergleichen Rauhigkeiten gesehen.

Lond. B. Journ. I. p. 188. 1842. *Brassavola tuberculata.* Common on rocky by the sea, near Rios as on the Moro do Flamingo, where it grows almost to the water edge. Jul. Aug. Gardner. Nr. 120.

50. BLETIA RETUSA. Huc: *Brassavola retusa* Lindl. B. Reg. 1847. sub 20.

Labello undulato cuneato truncato margine laevi.

Lip white with a little green near the base. Maracaybo.

51. BLETIA CEBOLETTA. Huc: *Brassavola Ceboletta* Rchb. fil. Bpl. III. 221.

aff. Brassavolae Perrinii gynostemio labelli oblongi acuti basi bicarinati dimidium aequante, postice tridenticulato, utrinque obtuse alato labellum usque. — Folium teres apice subulatum 5—6pollicare superne sulcatum. Pedunculus 1—2florus. Ovarium pedicellatum 2—3pollicare. Sepala lanceolata acuta. Tepala paulo angustiora. Labellum ima cum gynostemio connatum. Blüthen so gross, wie bei Brassavola cordata, Hüllblätter grün. Lippe und Säule weiss, am Grunde grün. Von Herrn Consul Schiller eingesendet.

β. Columnae auriculae antice acutae seu inaequali lacerae.

§. Uniflorae, raro biflorae.

52. BLETIA ACAULIS. Huc: *Brassavola acaulis* Lindl. Paxt. Fl. G. II. 152. N. 428. c. xyl. 216.

Foliis teretibus rectis et flore subsessilibus, sepalis petalisque linearibus patulis aequalibus, labelli lamina subrotundo ovata ungue cucullato duplo longiore.

App. Brassavola grandiflora in the size and form of lip. Only one flower appears on a very short stalk, greenish white, with some tendency to spotting, the firm and narrow sepals, about three inches long, and curving round the lip, the flat part roundish ovate and about twice as long as the rolled up claw. The leaves are remarkably short and stiff. The only plant we know is in the garden of Hort. Soc., where it was received from Mr. Skinner, and was reported to have pink flowers. — Central-America. Fl. cream colour.

52. BLETIA LINEATA. Huc: *Brassavola lineata* Hook. B. Mag. 4734. (1853).

Folio tereti acuminato inferne attenuato antice sulcato, pedunculo radicali bifloro, floribus magnis pendentibus, sepalis petalisque lineari lanceolatis conformibus, labelli ungue elongato integro, lamina amplo cordata acuminata, longitudinaliter plicata striata.

Dr. Lindley has referred me to Brass. acaulis, as allied, but different from this in its short leaves, one flowered peduncle, short unguis.

Huc: *Brassavola Mathieuana* Klotzsch Allg. Gtz. 1853. 290.

Caule ramoso; foliis teretibus acutis linea canaliculatis, flore solitario brevi pedicellato candido; perianthii foliolis lanceolato linearibus acutis patentibus, labello magno infundibuliformi acuminato integerrimo, margine acumineque subundulato reflexo, margine convoluto intus ad basin punctis paucis purpureis notato columna triplo longiore; columna nana, appendicibus duabus lanceolais falcatis instructa.

Central-Amerika. Warsewicz. Col. Mathieu.

54. BLETIA PERRINII. Huc: *Brassavola Perrinii* Lindl. B. Reg. 1832. 1561. B. Mag. 1840. 3761.

Flore solitario, labello cordato acuminato integerrimo, petalis sepalisque linearibus obtusis glabris, dentibus lateralibus clinandrii integris postico serrato, caule ramoso, folio tereti compresso subulato linea canaliculato.

Brassavola Perrinii Lindl. B. Reg. 1561.

Perigonium viride, labellum album viridi venosum. Brazil. Glasgow.

Besides a diff. in the flowers, this specimes may be further known from B. nodosa and B. cordata by its much slenderer leaves, braching stem, and blossoms appearing solitary.

§§. Pluriflorae.

55. BLETIA CORDATA. Huc: *Brassavola cordata* Lindl. B. Reg. XXII. 1836. t. 1914.

Labello cordato acuminato integerrimo ungue parum longiore, sepalis petalisque linearibus acuminatis, clinandrio integerrimo postice in dentem subulatum producto.

Flowers half the size of B. nodosa. Brazil.

Perigonii phylla viridia, labellum candidum.

Brassavola cordata B. Mag. 3782 (N. S. XIII). 1840.

Labello cordato acuminato longitudine unguis, petalis sepalisque linearibus acuminatis glabris, dentibus omnibus clinandrii integerrimis, caulibus basi nodosis.

Perigonium viride, rubro adspersum; labellum candidum.

Brazil introd. by Loddiges. Our plants received by Mr. Murray from Mr. Thomas Cowan, Overseer on the White River Estate, Jamaica: so that the species would seem to have a widely extented range. It is very closely allied to *B. nodosa* (B. Mag. X. 3229) a species from which Dr. Lindley distinguishes it by the flowers being

only half the size, with a cordate labellum, and a very diff clinandrium, but these are probably variable characters. The *B. nodosa* fig. in B. Reg. 1465 is a specimen with unusually large flowers.

56. BLETIA NODOSA. Huc: *Brassavola nodosa* B. Reg. XVII. 1831. 1465.

Labello ovato acuminato integerrimo, petalis sepalisque linearibus acuminatis, dentibus lateralibus clinandrii integris, postico emarginato.

Rhizoma repens; caules basi clavati sursum teretes monophylli squamis fuscis revoluti. Folia semipedalia, solitaria, carnosa, subtus convexa, supra canaliculata. Spicae 3—4 fl., foliis breviores, bracteis minutis, squamiformibus. Flores die inodori, noctu suaveolentes — Labellum album, limbo ovato subrotundo, acuto integerrimo, plano, ungue dimidio breviore, arcte convoluto, margine eroso, intus sanguineo.

Columna ungue labelli duplo brevior clinandrii dente postico emarginato, anticis integerrimis.

W. I. Island of Barn, off the coast of Carthagena, filling the woods at night with its fragrance. Jacquin. Jamaica Sloane. Mexico. Lubbock.

Huc: *Brassavola nodosa* Lindl. B. Mag. 3229 (N. S. VII. 33).

Labello cordato-acuminato basi angusto involuto, sepalis petalisque labelli longitudine linearibus acuminatis, columnae dentibus lateralibus integris intermedio bi—tridentato

Brassavola nodosa Lindl. Gen. et Sp. Orch. p. 114.
Epidendrum nodosum L. Sp. Pl. p. 1350. Jacq. Amer. p. 226. t. 140.
Cymbidium nodosum Sw. Nov. Act. Ups. v. 6 p. 73. Spreg. Syst. Veg. III. p. 722.
Viscum delphinii flore minus etc. Sloane Jam. v. 1. p. 251. t. 121 f. 3.

Perigonium f. 5 viridibus, labello albido virente.

From the stove of Charless Horsfall Esq. Mayor fo Liverp. who received it from Will. Parker, Esq. of Kingston, Jan. Flowers fragrant at night, obs. by the gardener Herry Evans.—Hook. B. J. 13. 1834. Lindl. on Peruv. Orch.: Near Cuença Colonel Hall.

Var. grandiflora: *Brassavola grandiflora* Lindl. B. Reg. XXV. 1839. Misc. 14:

Folio (plano?) anguste lanceolato rigido, labello maximo subrotundo quadrato acuminato ungue longiore, sepalis petalisque linearibus acuminatissimis.

Flowers of this, the finest of the genus, were received from Honduras by the Hon. W. F. Strangways. The limb of the labellum, which is white is considerably larger than a half crown, and the sepals and petals are nearly 8" long. It resembles a gigantic specimen of Brassavola grodosa.

Rchb. fil. in Bpl. II. 282. Santa Marta 3000'. Juni Nr. 1169. Schlim.
Rchb. fil. Bpl. II. 21. Carabobo 100'. October. Wagener.

57. BLETIA RHOPALORRHACHIS. Huc: *Brasavola rhopalorrhachis* Rchb. fil. in Mohl und Schlechtend. B. Ztg. 1852. 833.

Rhizomate repente, caulibus secundariis laxe vaginatis, foliis teretiusculis acutis abbreviatis, pedunculo validissimo, brevi, pauciramoso (!), bracteis triangulis acutis abbreviatis, perigonii phyllis linearibus acuminatis, lateralibus internis subaequalibus, angustioribus, labelli ungue ligulato, basi humerato, margine dense denticulato, subito in laminam ovatam antice acuto apiculatam, aequilongam dilatato, androclinio denticulato breviori, capsula brevissime rostrata.

Eine einzelne Blüthe könnte man leicht für die einer *B. venosa* halten, obschon die Längenverhältnisse ganz verschieden sind. Spannenhoch, der Blüthenstiel sehr kurz, 2 Zoll lang. Blüthen so gross, wie bei *B. venosa* des B. M. 4021. — Guatemala: Minegalpa 1846. Friedrichsthal (Wiener Museum).

58. BLETIA VENOSA. Huc: *Brassavola venosa* Lindl. B. Reg. XXVI. 1840. Misc. 24.

Folio lanceolato semicylindraceo supra canaliculato, sepalis petalisque linearibus, labelli ungue longe complicato lamina subrotundo-ovata subtriloba acuminata basi serrata: venis elevatis.

Resembles Br. nodosa in habit, but with much larger flowers, the sepals being more than 2'', long. The lip is white, other parts greenish. It is at once distinguished from B. nodosa and all allied species by the firmness of the lip, which is more or less evidently lobed at the sides and has the veins distinctly elevated. Flowers deliciously sweet at night. Mss. Loddiges imported it from Honduras.

B. Reg. XXVI. 1840. Tab. 39.

Folium semipedale, carnosum, lineari oblongum, acutum, atroviride, canaliculatum, marginibus rotundatis, nec uti in speciebus pluribus in cylindrum convolutum. Scapus folio brevior, spatha nulla conspicua, sed squamis paucis vaginatus, 3 florus, bracteis parvis rigidis acutissimis. Sepala et petala linearia, acuminata, virentia, 2 pollicaria, inter se aequalia. Labelli lamina candida, venis elevatis corrugata, subrotundo-ovata, acuminata, subcarnosa, integra v. obsolete triloba, basi serrata; unguis lamina parum brevior, convoluta, margine serrata, basi integerrima et maculis quibusdam sanguineis notata.

The leaf is intermediate between that of Br. glauca and the common terete species; and shows that in the latter the leaf owes its peculiar appearance in part to a general thickening of its parenchyma, and in part to the edges turning inwards and growing together. And this is no doubt also the origin of the terete leaves found in Vanda, Louisia, and Dendrobium.

Huc: *Brassavola venosa* Lindl. B. Mag. 4021.

Folio lineari lanceolato coriaceo-carnoso superne canaliculato, sepalis petalisque lineari lanceolatis, labelli ungue elongato serrato, lamina cordata acuminata venosa basi subserrata.

Brassavola venosa Lindl. B. Reg. 40. Misc. 24. t. 39.

In the form and serratures of the lip, we fear the species of Brassavola, as is the case with so many other Orchideae, are very liable to vary. That this plant is identical with the B. venosa of Dr. Lindley, there is probably little doubt, but the lab. is not so serrated and the lamina less disposed to be three-lobed. It was drawn in July from a plant that flowered in the Royal B. G. of Kew. — Much as it ressembles *B. nodosa* (B. M. t. 3299) as Dr. Lindley observes, it seems to us still more closely allied to *B. cordata* (B. Mag. t. 3782.) differing chiefly in the size of the flowers and breadth of the leaf, to which Dr. Lindley adds „in the firmness of the lip, which is more or less evidently lobed at the side" a variable character) „and has the veins distinctly elevated."

Perigonium viride, labello albo, purpureo extus picto.

Lindl. in Pl. Hartweg. fasc. 2. p. 93. 1842: Retatulen Mexici. Hartweg!

Planta mihi incognita: „*Laelia teres* Rchb. fil." Regel Gartenflora III. p. 408. Sphalma pro Ceratostylide tereti?

cc. Labellum trifidum seu tripartitum.

59. BLETIA RIGIDA. Huc: *Tetramicra rigida* L. O. 119. *Brassavola elegans* Hook. B. M. N. Ser. V. 1831. 3098.

Scapo racemoso, labello amplo basin columnae amplexante profunde trilobo, columna superne lato-alata.

Cyrtopodium elegans Hamilt. Prodr. Pl. Ind. Occ. p. 53 c. Ic.

I am indebted to Dr. Nicholson of Antigua for the drawing and description of the present, which appears so be exclusively inhabitant of the Island of Antigua. It

there grows, neither in soil, nor upon threes, but, as Dr. Hamilton, its original discoverer observes, upon stones: and according to Dr. Nicholson upon lofty rocks of the trap formation, along with Epidendrum ciliare, Oncidium pulchellum, Pitcairnia bromeliaefolia.

Our plant differs from Mr. Browns character of Brassavola in its deeply threelobed lip; but in Brassavola tuberculata and B. cucullata, the only hitherto known species of the genus, the two sides at the base are somewhat dilated or imperfectly lobed and in all the base of the lip almost surrounds the lower part of labellum.

Perigonii phylla viridipurpurea, labellum roseum, lobo medio violaceo striato, macula basilari flava, striis flavis inter strias violaceas. Columna rosea, antice stria flava.

60. BLETIA SCHOENINA:

Labelli auriculis triangulis, lacinia antica subaequali duplo majore, callo transverso medio incrassato, lateribus angulato (hinc quasi subhippocrepico) in infimo labello, columna apice utrinque alata, alis obtuse bilobis.

Planta juncea. Folia juncea subulata acuminata pedalia. Pedunculus longus, paucivaginatus, laxe racemosus. Bracteae minutae. S. Domingo. Schomburgk! (Herb. Lindl.).

61. BLETIA PRATENSIS:

Labelli auriculis semioblongis acutis basi subcordatis, lacinia media cuneato oblonga acuta paulo majori, lineis ternis elevatis basi gibbosis a basi in laciniae mediae discum, columna lato alata, alis superne dilatatis, post androclinium cucullata, paucicrenulata.

Among grass on the ground above the sea. S. Domingo. Schomburgk! (Herb. Lindl.)

62. BLETIA SCHOMBURGKII:

Labelli auriculis ovatis acutis, lacinia media flabellata biloba, lineis tribus elevatis a basi in discum; columna utrinque apice angulato alata.

Among grass upon the Savannahs near Pouton. S. Domingo. Schomburgk. (Herb. Lindl.)

63. BLETIA EULOPHIAE:

Labelli auriculi basilaribus minutis semiovatis, lamina cuneato obovata emarginata cum apiculo interjecto, columna utrinque acutangula, basi cum labello coalita. Tetramicra Eulophiae Rchb. fil. Mss.

„Terrestrial only. Plant about a foot high, with four to five upright rigid needleshaped leaves, which taper to a sharp point from a narrow base. Scentless. Flowers pale bister with a dingy pink labellum." Cuba. W. J. Macleay in Lindl. Herb.! Cuba. Aprili. Leibold! (Vidi in herb. Lindl. et Rchb. fil.)

64. BLETIA PARVIFLORA:

Labelli auriculis basilaribus magnis dimidiato semiovatis acutis seu antice rectilineis postice curvilineis, lacinia antica cuneata ligulata acuta (subrhombea), callo transverso ante basin columnae, columna panduraeformi. Folia teretia? complicata? certe abbreviata, sulcata, curvula, vix ultra tres lineas longa. Flores minuti illis Liparidis Loeselii vix majores. Tetramicra parviflora Lindl. in herb. Hook. Decbr. 1854. Jamaica. Herb. Hook.

65. BLETIA TENERA: A. Rich. in Ramon de Sagra. Tab. 88.

Folio tereti carnoso, subulato ex ima caulis parte orto, 9—10 uncias longo, scapo (caule) sesquipedali, erecto, basi simplici, nudo, vaginis brevissimis appressis acutis, in parte superiori simplici aut ramoso; floribus parvulis violaceo purpureis racemosis aut subpaniculatis; sepalis patentibus ovali-lanceolatis acutis; labello longiori, sessili, obovali

obtuso, margine eroso-sinuoso, basi hinc et illinc lobulo acuto aucto, venoso nec carunculato; gynostemio erecto apice et antice oblique truncato; polliniis 8 per paria connatis, anticis minimis.

Santiago di Cuba.

F. *Plicifoliae*: foliis chartaceis plicatis. Pseudobulbosae pseudobulbo depresso tumido.

I. Labelli laciniae omnes limbo planae.

aa. Labelli laciniae posticae triangulae.

66. **BLETIA SECUNDA** Lindl. B. Reg. XXVI. 1840. Misc. 120.

Foliis oblongo—lanceolatis acuminatis 7 nerviis, floribus racemosis, sepalis petalisque herbaceis subaequalibus, cuneato-oblongis secundis collateralibus, labelli trilobi laciniis lateralibus nanis erectis, intermedia obovata emarginata, margine inflexa secus medium bilamellata.

Flowers green slightly dotted with crimson, with a straw coloured labellum. Mexico. imp. Lodd. It is remarkable for the sepals and petals being all directed into a plane parallel with the labellum and overlying the column.

Huc: *Eulophia dilatata* Lindl. in Ann. nat. Hist. X. 1842. p. 184.

Foliis —, scapo stricto simplici, bracteis acuminatissimis ovario brevioribus, sepalis lanceolatis acutis, petalis paulo obtusioribus et latioribus, labello basi mutico biauriculato, sursum dilatato obtuso: venis 5' basin versus lamellatis.

Mexico. Karwinski herb. reg. Monac. Flowering scape more than 2' high. Sepals about 3/4'' long.

bb. Labelli laciniae posticae longe cuneatae.

67. **BLETIA ADENOCARPA** Rchb. fil. in Seemann Bonplandia IV. p. 216.

68. **BLETIA GRACILIS** Lodd. Bot. Cab. 1681. B. Reg. XX. 1835. t. 1671.

Sepalis petalisque subaequalibus lanceolatis acuminatis, labelli trilobi lobis lateralibus rotundatis intermedio transverso emarginato undulato: lamella solitaria in medio, foliis plicatis oblongo-lanceolatis acutis, subtus discoloribus.

Pseudobulbi ovati, aggregati, purpurei. Folia plicata, membranacea, latitudine variabilia, saepius unico tantum perfecto cuique pseudobulbo. Scapus terminalis gracilis, purpuratus, 1½ pedes longus, erectus, calami corvini crassitudine, parcissime squamatus, apice racemum 3—4 florum gerens. Flores subringentes, sepalis petalisque sordide luteis, roseo versus apices suffusis, labello basi roseo venis picto apice luteo. Mexico. (Prov. Mexici Temascaltepec. Dr. Schiede in herb. de Roemer.)

69. **BLETIA PARKINSONI** Hook. Mag. LXVI. 3736:

Scapo simplici longissimo, sepalis petalisque lanceolato, linearibus erectis, labello oblongo trilobo lobis lateralibus brevibus, incurvis, intermedio ovali crispato, disco lineis elevatis 5 undulatis.

Mexico, sent by Mr. Parkinson.

Bulb terrestrial, subglobose, but gibbous. Scape two feet and more long, slender, jointed, with brownish, sheathing bracteas at the joints. Raceme seven to tenflowered. Flowers rather more than an inch long, spreading. Sepals, petals, and lip erect or closed, the two former equal, linearlanceolate, rather acute than acuminate, deep rose colour. Lip rather longer than the sepals, and almost enclosed by

them, oblong, yellow, threelobed, the two side lobes short, obtuse, incurved, purplish, the middle one oval, reflexed, crisped, blotched, at the margin with deep purple. The whole disk mark with five elevated, waved lines. Column enclosed by the lip, grooved in front. Anthercase purple. Pollenmasses eight, yellow.

cc. Labelli laciniae posticae rotundatae.

70. BLETIA FULGENS Rchb. fil. Bpl. III. 221.

aff. B. coccineae Lexarz. perigonio laevi, labelli trifidi laciniis lateralibus triangulis obtusatis, lacinia media cuneiformi, apice porrecta dilatata obtuse biloba cum apiculo in sinu, lamellis tribus a basi apicem usque humilibus, in basi lobi medii et in ipso apice iterum elevatis abrupte triangulis.

Certe erit planta, ad quam alluditur L. O. p. 123 sub B. coccinea „Llave". Sed planta Lexarzae excellit: perigonio pollicari (dum B. campanulata nostra adhuc minor sesquipollicare gerit), dilute coccineo, velutino, labello apice profunde emarginato. Caulis tripedalis. Vaginae infimae elongatae violaceae viridi-punctulatae. Folia bina linearilancea, bene nervosa, elongata. Pedunculus sub racemo laxo pauciflorus, longe subnudus (bivaginatus). Bracteae triangulae aristatae abbreviatae. Sepala lanceolata acuta. Tepala paulo latiora. Omnia bene cuneata. Labelli lacinia media angusta. Flos illi B. campanulatae major. Gynostemium gracile angusté alatum. „Cette belle Orchidée terrestre est très rare Les fleurs sont d'un rouge orange, le labelle est rayé de carmin. Elle croit près de Cuernevaca dans des terrains argileux et au bord des barrances. Jamais je ne l'ai rencontré dans d'autrès localités. Juin. Juillet." Ghiesbreght.

71. BLETIA CATENULATA R. Pav. Syst. 229.

II. Labelli laciniae limbo planae, lacinia antica crispula.

a. Mentum parvulum.

aa. Labelli lacinia antica convoluta reflexa.

72. BLÈTIA REFLEXA Lindl. B. Reg. XXI. 1836. 1760.

Sepalis lineari-lanceolatis, lateralibus reflexis, petalis cuneato-lanceolatis supra columnam conniventibus, labelli trilobi lobis lateralibus rotundatis planis, intermedio angusto undulato, lamellis 5 altis parallelis indivisis in pedem columnae decurrentibus, foliis angustis ensiformibus plicatis.

Folia angusta ensiformia plicata. Scapus $1\frac{1}{2}$—2, teres, distanter vaginatus 2—4 florus. Bracteae oblongo-lineares, membranaceae, ovario duplo breviores. Sepala angusto-lanceolata, ex viridi rubescentia basi alba; lateralia reflexa, supremum paulo latius magis erectum, apice tantum reflexum. Petala ex viridi rubescentia, cuneato erecta, acuta, collateralia, columnam a tergo tegentia. Labellum cucullatum parte inferiore album, cum basi columnae articulatum, oblongum, trilobum; lobis lateralibus erectis rotundatis, albis, margine roseis, intermedio elongato pariter subrotundo, crispo, atropurpureo, patente, lamellis 5 altis integris, subundulatis, totum axim labelli percurrentibus. Columna purpurea, elevata, apice alata, dente unico incurvo post cardinem antherae. Pollinia 8, 4 caeteris minora. Mexico. Karwinski. — Lodd.

bb. Labelli lacinia antica expansa.

α. Labelli laciniae omnes antrorsae.

73. BLETIA JUCUNDA Lind. Rchb. fil. Rchb. fil. Bpl. III. 221.

aff. B. reflexae Lindl. labello cuneato ovato apice trilobo, lobis lateralibus obtusangulis, lobo medio aequilongo anguste quadrato margine

et antice crispulo cum apiculo, venis quinis internis nervosis dimidio anteriori lamelligeris, lamellis ante apicem praeruptis, gynostemio arcuato, angustissime marginato. Folia oblongo lanceolata haud egregie nervosa, subpedalia, medio sesquipollicem lata. Pedunculus apice pauciflorus. Bracteae triangulae minutissimae. Perigonium illi Bl. campanulatae aequale. Sepala lanceolata. Tepala oblongolanceolata obtuse acuta; rosea. Labellum ex sicca viridiflavum nervis purpureis; lobo medio et apicibus loborum lateralium purpureis. „Cette gracieuse Orchidée terrestre croit sur les rochers dans l'état de Michoacan." Octbr. bis Decbr. Ghiesbreght.

74. BLETIA LANSBERGII Rchb. fil. in Kenidskndg. Archief 1857 (?). Orchideae quaedam Lansbergianae.

β. Labelli laciniae posticae laterales, rectangulae.

75. BLETIA CAMPANULATA Llav. — Rchb. fil. Bpl. II. 22:

Foliis oblongis utrinque attenuatis acuminatis pedunculo subbrevioribus, vulgo binis, altero quidem angustiore, pedunculo simplici apice paucifloro, bracteis lanceis acutis ovario ter brevioribus, sepalis lanceolatis acutis, tepalis obovatolanceolatis apice obtuso apiculatis, labello flabellato trilobo, lobis lateralibus triangulis, lobo medio longius producto obcordato cum interjecto apiculo apicilari, crispulo, lamellis 5 a basi labelli ad medium usque, ibi in lamellas petaloideas primum obtusangulas, dein rectas integerrimas usque ante apicem labelli productis, ibi abrupte desinentibus, lamellis lateralibus brevioribus, venulis disci elevatulis, gynostemio clavato, haud conspicue alato.

Mexico.

Lindl. in Bentham. Pl. Hartweg. p. 72:

In montibus Teojomulco Hartweg. Mexic.

76. BLETIA WAGNERI Rchb. fil. Bpl. II. 22:

(aff. campanulatae): foliis oblongis acutis, pedunculo valido ramuloso seu simplici, racemo rarifloro, grandiflore, bracteis ovatis setaceo acuminatis ovaria perigonio breviora haud ultra dimidium aequantibus, sepalis tepalisque paulo latioribus oblongis acutis, labello flabellato, apice trilobo, lobis lateralibus obtuse triangulis, margine antico crispulis, lobo medio paulo producto obcordato margine crispulo, lamellis 3 membranaceis crenatis conspicuis in parte labelli anteriore usque ante apicem lobi medii, carinulis in basi vix prominulis, fasciola membranacea in utroque disci latere; columna clavata, alis subrhombeis in partis apicilaris angulis prominulis. Guareyma. Juni 1850. Wagner.

cf. etiam v. Schldl. Linnaea XXVI. p. 143.

b. Mentum manifestum.

77. BLETIA FLORIDA RBr. Hort. Kew. Ed. 2. v. 5. p. 206.: B. Reg. XVI. 1830. 1401. Hue: DC. Hult: Not. p. 23.: *Bletia florida* RBr. *hort. Kew. Ed.* 2. v. 5. p. 206. excl. syn. Red.

Sepalis ovati lanceolatis obtusiusculis subpatentibus, petalis latioribus obtusis supra columnam fornicatis, labelli disco costis 5 rectis indivisis, lobis lateralibus rotundatis abbreviatis, intermedio cuneato crispo, scapo simplici radicali, foliis ensiformibus, bracteis minimis, floribus pallide roseis, labelli lobo medio albo.

Trin. ex Lodd.

β. *meridana* Rchb. fil. Bpl. II. 22.:

Semper albiflora, lamellis in nervis longitudinalibus labelli cristulis minoribus praeditis.

Merida. Moritz. Wagener.

Rchb. fil. in B. II. 282. Santa Marta. 3000'. Nr. 988. Schlim.

Rchb. fil. III. 69. Ocanna. Wagener.

III. Labelli laciniae omnes manifeste limbo undulatae.

78. BLETIA LILACINA Rich. et Gal. Ann. sc. Nat. 1845. Jan. p. 23.

Foliis linearibus acutissimis scapo brevioribus; floribus parvulis lilacinis: labelli lobis lateralibus obtusis, intermedio oblongo obtuso.

Mexico.

79? BLETIA ANOMALA. Rich. et Gal. Ann. sc. nat. 1845. Janv. p. 23.

Scapo pedalis; sepalis purpureis: labelli trilobi lobis lateralibus obtusissimis margine sinuosis, intermedio subrotundo; polliniis 8 in quattuor concretis.

Mexico.

Obs. Mihi incognita!

80. BLETIA VERECUNDA (RBr. Hort. Kew. V. 206?) Lindl. (Orch. 121) et herb.!
Bletia pulchella Hort. G. Chr. 1850. 168.

Huc: *Bletia Shepherdii* Hook. B. M. 3619 (N. S. VIII) 84.

Perianthio erecto-patenti, sepalis oblongis acutis, petalis obtusissimis undulatis, labelli disco lamellis 5 — 7 rectis undulatis lobo intermedio reflexo lato cuneato bilobo valde crispato, foliis lato-lanceolatis longe acuminatis. Lamellae flavidae, perigonium lilacinum.

Jamaica received by Mr. Spepherd at Liverpool Gard.-Wenthworth.

Its nearest aff. is with *Bletia verecunda* (Limod. altum B. Mag. 930 not of Jacq. Rar. 60.) But there the flowers are much smaller, greatly shorter in proportion to the size, very gibbous or almost spurred at the base, the sepals much more patent, and very pale on the outside, and the lip has a white margin: the leaves too are much narrower. —

Our plant has been cultivated by Mssr. Sphepherd under the name of „Limodorum tuberosum" from an idea perhaps, that it was the „*L. altum s. tuberosum of Jacq.*" But that plant I have endeavoured to prove is the same with our Bletia acutipetala (Tab. 3217), and the name tuberosa being equally applicable to other species of the genus.

Huc: *Bletia Sphepherdi* B. Reg. XXIV. 1838. Misc. 78.:

Flowered lately in the garden of the Hort. Society and I find it is only a dark flowered variety of Bletia verecunda, it does not appear to be distinguishable by any character of importance.

81. BLETIA HAVANENSIS Lindl. B. Reg. 1838. XXIV. Misc. 35:

Scapo simplici foliorum longitudine, sepalis patulis obovatis acutis elamellatis, petalis supra columnam conniventibus ovatis obtusiusculis undulatis, labello subrotundo-ovato cucullato trilobo: laciniis lateralibus obtusis intermediam retusam crispam longiorem basi imbricantibus, cristis tribus lamellatis, versus apicem interruptis, basi evanescentibus, venis duabus utrinque arcuatis varicosis.

Diff. from *B. verecunda* in the colour of its flowers, which are much paler and its unbranched scape, and in the form of its lip, whose crested plates are interrupted about the base of the middle lobe and bounded on each side by a pair of curved varicose veins. Introd. by Capt. Sutton in 35, added to Sir Charle Lemons coll. at Carclew, where it flowered March 1837.

Bletia acutipetala Hook. B. M. 3217. (N. S. V. VII). 33.

Sepalis quorum duobus medio lamellatis petalisque conniventibus ovatis valde acutis aequalibus, labelli disco lamellis 5 rectis subundulatis, lobis lateralibus ovatis, intermedio apice dilatato crispato, scapo radicali alato ramoso, foliis ensiformibus plicatis.

Limodorum altum Jacq. Ic. Rar. v. 3. t. 602. vix L.

Perigonii foliola 5 rosea, sepalis inferioribus albido striatis; labelli lobo medio flavo, albo cristato, labelli apice obscure violaceo.

B. florida and *verecunda*, its nearest allies, are natives of the West Indies; this of South Carolina, whence it was directly received at the Liverp. B. G. It may possibly be the *Bl. verecunda* (Cymb.) of North americam authors: and it is, I think, certainly the Limod. altum of Jacquin: there the petals are acute, and the elevated line or lamina is distinctly represented in the fig.

Obs. Hic locorum inserenda videtur:

Bletia verecunda RBr. Kew. V. 206. DC. l. c.:

Sepalis ovalibus cuspidato acutis subpatentibus, petalis oblongis obtusis supra columnam fornicatis, labelli lobo medio latiore, quam longo undulato, disco costis 5 simplicibus, scapo radicali ramoso, foliis ensiformibus, bracteis ovato lanceolatis, majusculis.

Ins. Caraib. LO. 126. Limod. alt. L. Jacq. Ic. Rar. III. 602.

Flore intense purpurei, labello concolore, costis ut in prioribus luteis.

Huc forsan pertinet:

Bletia purpurea DC. l. c.

Sepalis ovalilanceolatis subpatentibus petalisque acutiusculis supra columnam fornicatis, labelli disco costis 7—9 rectis indivisis, lobis lateralibus abbreviatis ovalibus, intermedio cuneato crispo, scapo parce ramoso radicali, foliis ensiformibus, bracteis minimis.

Bahamas ex Mich. et Rich.

Limod. purp. Lam. dic. III. 515. nec Lin. nec Mich. ad Calopog. tenell. refer. Red. lil. 2. t. 83.

Floribus purpureo-roseis, labelli lobo medio concolore, imo intensiori.

Obs. Icon vere execrabilis Redoutiana mihi chartam lineis coloribusque fucatam, nec iconem botanica scientia dignam refert. — Icon turpior adhuc exstat in Paxt. Mag. 146. — Forsan pro infantibus Anglorum? Rchb. fil.

82. BLETIA PATULA Hook. B. Mag. 3518 (N. S. X. 36).

Foliis radicalibus lanceolatis plicato-nervosis, scapo alato subramoso, floribus patentissimis, sepalis lanceolatis-ellipticis basi attenuatis subaequalibus patulis, labello cucullato, lobis lateralibus rotundatis, medio emarginato transverso plicato, disco lamellis 6 subramosis inaequalibus.

Received at the Bot. G. Edinburgh from Dr. Fischer St. Petersburgh 1830, without specific name, marked as native of Hayti.

Perianthium roseum, lamellis candidis.

Lindl. Pl. Lind. 1846. p. 10. N. 58. Sandy hills of Yatera in Cuba. Flowers large bright purple, leaves lanceolate 1½' long, pseudobulbs very strong, roundish oval, stem 1½' high.

Bletia patula Hook. Lindl. Paxt. Fl. G. II. 69. N. 335 c. Xyl. 167.

Imp. from Hayti. — Mr. Linden: Yatera in Cuba. In general habit as *B. verecunda*, still more like *B. Sphepherdii*; its lip is however in no degree 3 lobed, although from the manner in which it is folded on each side of the end it looks as it if were so.

Obs. BLETIA PURPURATA Rich. et Gal. An. sc. nat. 1845. Jan. p. 23.

Scapo 2—3floro; foliis oblongo-lanceolatis acutis, scapum aequantibus, 7-nerviis; floribus intense purpureis: labello sepalis longiore apice obovali, emarginato. Mexico.

Nec est Bletia, nec est Epidendrum, nec est Coelorchidea. Est Arethusea, Crybe rosea Lindl. . Favete linguis.

G. *Distichifoliae:* caule distichifolio. Ebulbis.

86. BLETIA MONTANA. *Cymbidium montanum* Sw. Nov. Act. Ups. VI. 72.

Caule simpliciusculo, foliis latolanceolatis, apice subrecurvis, racemo terminali, floribus secundis, labelli lamina trifida. Jamaica.

Octomeria serratifolia Hook. B Mag. 2828:

Foliis distichis apice serrulatis linearilanceolatis basi vaginantibus, racemo terminali paucifloro, labello oblongolineari crenulato: lobo intermedio abbreviato obtuso, sepalis petalisque lanceolatis. „Brasilia".

Reperi specimina in herbario Hookeriano. Adest specimen cultum originale pro icone edita. — Aderat praeterea (1856) specimen jamaicense a M. Fadyen lectum, quod delineavi. Nunc ad manus habeo specimina tria ex herbario Holmiano. „Cymbidium montanum Sw." Specimina florida vultum gerunt quasi et mutatis mutandis! — Cephalantherae. Radices adventitiae firmae egrediuntur. Vaginae infimae breves verruculosae; infimae arcte appressae fusco guttatae. Folia disticha pergamenea oblongolanceolata apice attenuato mucronata, ante mucronem serrulata. Pedunculus terminalis basi vagina una alterave compressa acuta vestitus. Bracteae vaginiformes apiculatae. Flores bene pedicellati. Mentum modicum. Sepala ligulata acuta. Tepala subaequalia. Labellum lateribus trilobum, lobi laterales rectanguli, lobus medius cuneato dilatatus retusus obtusangulus; nervi 3 medii carinati. Columna curva; androclinii limbus quinquedentatus. Anthera sexlocularis. — Vaginarum bases in annulis nigris caulis sessiles.

H. *Aphylla:* caule aphyllo. Ebulbis.

87. BLETIA APHYLLA Nuttall gen. II. 194.

137½ HARTWEGIA Lindl.

B. Reg. XXIII. 1837. sub 1971.

Perianthium patulum, coloratum; sepalis lateralibus basi productis labello adnatis. Labellum cum columna connatum, basi gibbosum, limbo ovato basi calloso. Anthera 4-locularis. Pollinia 4, olivaceo purpurea, filis replicatis. Caulis monophyllus. Pedunculus longissimus capillaris, arcte vaginatus, apice floridus.

1. HARTWEGIA PURPUREA Lindl. B. Reg. XXIII. 1837. sub 1971.

Folium solitarium, coriaceum, ovato-lanceolatum, lentiginosum, cauli tereti aequales pedunculo capillari multoties brevius Flores parvi, purpurei. Sepala acuta, petalis paulo majora. Labelli limbus basi albus callosus.

var. *angustifolia* B. Reg. XXIX 1843. Misc. 58. Guatemala. George Ure Skinner Esq. added to Sir Charles Lemon's coll. at Carclew Aug. 1841. Distinct from the original form of the species in its leaves and flowers, yet the general habit and appearance of the 2 plants are so very similar, that the present one can only be regarded as a well defined variety of the other. Its leaves are from 3—4" long, and from ½"—1" in breadth, oblong lanceolate-acute, very thick and fleshy, hollowed, along the middle and tapering to both ends; of a brownish green colour, singularly marked with numerous deep brown irregularly formed spots.

The scape erect, 1' long, round and wiry, with many joints, each of which is surrounded by a pale brown-coloured bract, which closely embraces the stem, and covers it half way between joints. Flowers are terminal, of the same bright pinkish colour as those of the old variety, from which however they differ in the form and size of the sepals, which are not obliquely cordate, but ovate oblong, and rather smaller than in the other. The labellum is also very different being much larger in every respect and having a notch at the point; where as in the original species it is small, roundish cordate and forms a kind of spur where it joins the column. In this variety there is no appearance of a spur but it is narrowed round the column and has a singular indentation just opposite its point. — The column is curved and about the same length as the sepals and petals. It is also a deeper pink, and is rounded on the upper side; beneath it is 2 edged from being slightly hollowed out along the middle. The anther case is somewhat reniform, brownish pink, much darker than any other part of the flower." — Wm. B. Booth.

1373 DIOTHONAEA *Lindl.*

Hook. B. J. 1 p. 12. 13. — 1834.: Lindl. on Peruv. Orchideae.

Sepala conniventia, distincta; lateralibus paulo longioribus. Petala sepalo supremo concavo conformia et subaequalia. Labellum cum cyatho e lateribus dilatatis membranaceis columnae formato articulatum, obsolete lobatum, basi bilamellatum, sepalis lateralibus multo longius, dependens. Columna erecta, clinandrio cucullato antheram obsolete 4 locularem semitegente. Pollinia 4, solida, pyriformia, apice materie pulverea cohaerentia. Herba epiphyta, racemosa, ebulbis. Racemi axillares, multiflori, foliorum longitudine. Flores majusculi.

This distinct genus is remarkable for a wide, compressed cup, formed by the dilated cuneate margins of the column, with which the labellum is articulated. Its principal affinity is with Epidendrum, from which it is farther distinguished by its 4 pyriform pollen-masses and hooded clinandrium. The exact nature of the powdery matter, that terminates the pollen-masses, I have not ascertained: it most probably indicates the presence of the replicate straps that characterize *Epidendreae*. From ὀθόνη a sail, in allusion to the 2 membranes stretched from the column to the lip, like jibs from the formest to the bowsprit of a ship.

1. DIOTHONAEA LLOENSIS l. c.

Caulis ramosus, compressus, vaginis persistentibus foliorum squamatus, pedalis v. ultra. Folia lineari-lanceolata, striata, margine revoluta, apice paululum obliqua et subcartilaginea. Racemi 2 pollices longi, 9 flori. Bracteae subulatae, scariosae, reflexae. Flores membranacei, verosimiliter flavescentes. Labellum subrotundum, concavum, obsolete 4 lobum.

Valley of Lloa, western declivity of the Andes. Colonel Hall.

2. DIOTHONAEA GRATISSIMA Rchb. fil. in v. Mohl u. v. Schlchdl. bot. Zeit. 1852. 772.

Foliorum vaginis laevibus, nec arpophyllaceis, lamina apice obtuse emarginata, medio mucronulata, nec biloba, labello basi vulgo biauriculato. —

2. DIOTHONAEA SUAVIS Rchb. fil. Wswz. Bpl. II. 112.

aff. D. gratissimae quadruplo major labelli nervis mediis serrulato carinatis, alis gynostemii more D. lloënsis dependentibus.

Caulis penna anserina crassior, ramosus. Vaginae arpophyllaceae, laminae ligulatae obtusae cum apiculo, racemus — 9florus, bracteae lanceosubulatae ovario pedicellato bis—ter breviores, flores inversi, speciosi, sulphurei (ex sicco); sepalum summum triangulum acutiusculum, sepala lateralia subaequalia, margine inferiori oblique basin

. venose obtusangulo curvata, tepala oblonga acutiuscula, medio latiora, labellum cuneato flabellatum, antice lobulatum, minutissime denticulatum, nervi 7 medii carinato elevatuli antrorsum serrulati a basi ad medium discum, basis labelli cum gynostemio quidem connata, sed secus alas gynostemii limbum liberum angustissimum efformans, gynostemium more generis incurvum apicem prope usque alatum. Blüthen mehr als viermal so gross wie die der D. Iloënsis Lindl. und gratissima Rchb. fil., getrocknet schöngelb, wie die trocknen Blüthen des Epidendrum aurantiacum. Peru. v. Warsceowicz.

4. DIOTHONAEA HETEROTHONAEA Rchb. fil. Warswz. Bpl. II. 112.:

Sepalis lanceis acutis, gynostemio cum labello prope apicem usque connato, trilobo retuso denticulato.

Caules ramosi, vaginae microscopice arpophyllaceae, vaginae inferiores laxae, ampliusculae. Folia lineariligulata apicem truncatum obliquum emarginatum versus attenuata, racemus cernuus, haud ita multiflorus (—13). Bracteae linearisetaceae ovario pedicellato quater breviores, sepalum summum linearilanceum, lateralia subaequalia, obliqua, tepala anguste linearia, labelli lamina libera ovata seu trilobula retusa, margine minute denticulata, gynostemium rectum cum labello paulo divergens, apice ascendens usque ad apicem prope alatum, alis suis demissis cum labello connatum, labello connatum, laminae transitus extus sutura notatus. Die Gestalt der Hüllblätter und die Richtung der Säule zeichnen diese Art von der andern aus. Die Blüthen so gross, wie bei D. Iloënsis, aber länger. Die Gattung halten wir für trefflich, nachdem sie selbst bei einer so abweichenden Form sich bestätigt. Peru. v. Warscewiz.

1375. ISOCHILUS *Rchb. fil.*

in Bonplandia III. 221:

— *Isochilus* RBr. mera est farrago —

Labellum sigmoideo flexum, pollinia sex. Ex descriptione I. linearis RBr.: Perigonium externum basi connatum. Sepala a medio libera, lanceolata, acuta; lateralia nervo medio prominulo carinata, angulata. Tepala ligulata, basi angustata, acutiuscula, altius inserta in gynostemio Labellum lineare acutum, apicem versus sensim dilatatum, ante unguem baseos sigmoideo flexum, dein ascendenti curvatum, utrinque brevi auriculatum, apicem versus dilatatum. Gynostemium a tenuiori basi clavatum. Androclinium tridentatum, dentes erecti: posticus medius minutus, laterales antici falcati, erecti, pagina media interne carinata, carinis utriusque lateris transcendentibus (Sophronitidis more) in rostellum sursum exciso semilunatum, medio unidentatum. Stigmatis fovea semilunata, marginis inferioris curvatura in angulum antrorsum dentium androclinii lateralium ascendente. Anthera oblonga apice conica: anthesi postice omnino aperta, bilocularis, sexlocellaris, loculus uterque sejunctus, trilocellaris. Locellus summus parvus, triangulus, inferiores locelli elongati, collateralas, majores. Caudicula oblonga, antice carinata, apice exciso biloba. Pollinia quaterna, oblonga, utrinque extrorsa, oblique collateralia; replicata ascendentia, igitur in caudiculis incumbentia; duo minora oblonga compressa sessilia in margine excisurae, terminalis caudiculae demum extrorsum replicatae.

Flores postici in spica arcta secunda torsione ovarii latere oppositi nervo medio bractearum.

1. ISOCHILUS LINEARIS R. Br, H. Kew. ed. 2. V. 209. Rchb. fil. in B. II. 282: Ocanna. 5000'. October. Nr. 996. Schlim.
   Rchb. Bpl. II. 82: Caracas. Wagener.

2. ISOCHILUS MAJOR. v. Schlechtendal Linnaea VI. 60. — Mexico Jalapa. Schiede. Aug. Herb. gen. Berol. 4.

3. ISOCHILUS CRASSIFLORUS. Rich. et Gal. tab. 20. Annales des sc. nat. 1845. Janv. p. 22.

Foliis distichis oblongo-lanceolatis, obtusis; floribus roseis, carnosis; spica unilaterali; bracteis obtusis; labello longe unguiculato lamina ovali apiculata. Mexico.

4. ISOCHILUS LATIBRACTEATUS. Rich. et Gal. Annales des sc. nat. 1845. Jan. p. 22.

Foliis distichis linearibus obtusis; floribus intense purpureis spicatis; spica terminali recurva unilaterali bracteosa; bracteis suborbicularibus obtusis. Mexico.

5. ISOCHILUS CARNOSI FLORUS Lindl. Gard. Chronicle 1845.

1376. ARPOPHYLLUM *Llav. et Lex.*

Nov. Veg. descr. 2. 19.

1. ARPOPHYLLUM SPICATUM Llav. et Lex. l. c. L. O. 151: Lindl. Ann. herb. Hist. 1840. IV. p. 384:

Folio carinato arcuato, pedunculo spatha breviore. Mexico. Hartwg.

Flowers deep purple, arranged in a spike about 3" long.

Lindl. B. Reg. XXV. 1839. Misc. 16.:

Reached England in a living state. The stem is slender and 1' or 1½' high, with the sheaths as rough as shagreen leather. It is terminated by one long curved leaf, from the axil of which there curves in an opposite direction a dense spike of pink or pale purple flowers. It is a species of great rarity even in Mexico, where it has hitherto been only seen at Sultepec and near Aricubaro, growing upon trees. It belongs to Epidendreae near Ponera, and not to Vandeae. Bentham pl. Hartwg. 72 (Lindl.) 1839: Hacienda del Carmen. Mexic. Hartweg.

2. ARPOPHYLLUM ALPINUM Lindl. in Pl. Hartweg. p. 93. 1842.

Folio oblongo plano mucronato, pedunculo spatha breviore s. ei subaequali, racemo denso cernuo. Lindl.

In montibus Totonicapan, alt. 10,000'. in Alnum mexicanam, supra Quercuum regionem; nec non juxta Cliatepeque, et rupibus horridis loco „Canada de todos Santos" dicto. Mexico. Hartweg.

3. ARPOPHYLLUM CARDINALIS Lind. Rchb. fil. in Bpl. II. 282.

aff. Arpophyllo giganteo folio bipedali superne vernixio, spatha bene rugulosa sexpollicari, racemo cylindraceo elongato, perigonio florido ovarium dimidium aequante, perula modica, tepalis ligulatis acutis, serrulatis, labello prope recto, sacco antico et basilari subaequalibus, gynostemii dorso valde carinato, androclinio postice valide tridentato, rostello rotundato medio acuto.

Internodium infra foliaceum spithamaeum vagina una ancipiti acuta utrinque rugulosa vestitum. Pedunculus, ovaris muriculata. Mentum obtusum. Perula effecta ex labelli impressione in sepala lateralia haud conspicua transversa. Gynostemii fovea elliptica, limbus inferior prope rectus, medio tamen basin versus angulatus, anguli prominuli in marginibus lateralibus desunt, protuberantia basilaris conspicua. — Blüthen rosa. Lippe 5—6000'. Ocanna. December. — Nr. 1186. Schlim. — Pescatorea t. 45.

4. ARPOPHYLLUM GIGANTEUM. Lindl. Ann. nat. hist. IV. 1840. p. 384.

Folio ensiformi, plano, pedunculo spatha multo longiore.

Must be at least 3' high; its flowers are pale lilac, and disposed in a spike from 6—7" long.

Lindl. in Pl. Hartw. p. 92.: inter Tanetze et Talea Mexici. Hartweg!

1376/[1]. TETRAGAMESTUS Rchb. fil.

in Bonpl. II. 21.

Genus Poneram inter et Epidendrum: ovarium fusiforme ecuniculatum, sepala ac tepala oblonga acuta, sepala lateralia basi angulato producta mentum mentientia. Labellum cuneatum cum gynostemio articulatione subimmobili coalitum, disco callosum, medio refractum. Gynostemium clavatum ab angustiori basi utrinque angulato dilatatum, fovea stigmatica majuscula. Anthera Epidendri. Recedit a Ponera: gynostemio apodo; labello refracto, — ab Epidendro: sepalorum lateralium mento: labello refracto.

1. TETRAGAMESTUS MODESTUS Rchb. fil. Bonpl. II. 26:

Caule articulato, articulis fusiformibus vaginatis apice diphyllis, foliis lineariligulatis utrinque attenuatis, 5—6 pollices longis, medio $^2/_5$ pollices latis, articulo insequenti axillari ex praecedente, floribus carnosis inversis, gynostemio ac perigonio cum ovario angulato, ovario basi bivaginato, sepalis lateralibus in mentum conspicuum productis, omnibus oblongis acutis, tepalis subaequalibus paulo angustioribus, brevioribus, labello ligulato medio trilobo lobis lateralibus triangulis parvis, lobo medio producto triangulo, refracto, callo obtuse bilobo in disco, fovea nectarifera in basi, gynostemio semitereti angusto superne utrinque obtusangulo dilatato, fovea stigmatica transversa magna, fovea nectarifera in basi.

Blüthen so gross, wie bei *Maxillaria uncata*, blaugrün, mit violetten Puncten, Lippe weiss, Säule am Gipfel und vorn auf Mitte violett. In den Gärten der Herren Seidel in Dresden, Josst in Tetschen, Consul Schiller in Homburg. Rchb. fil. Xenia I. p. 42. Tab. 19. I. II. III. 1—6.

2 TETRAGAMESTUS AUREUS Rchb. fil. Bpl. II. 22.

(Scaphyglottis ruberrima Lindl.? β aurea Rchb. fil. Linnaea): Caule teretiusculo multo quam in Ponera leucantha validiori, ex icone nunc ultra pedali, basi attenuato, ramoso, longi articulato, eodem certe ut in priori modo producto, nunc trichotomo, foliis 2—3 in articulorum apicibus, foliis lineariligulatis, basi attenuatis, apice retuso bilobulis, ad 3 pollices longis, $^1/_4$ poll. latis, floribus in articulorum apicibus fasciculatis, illos Maxillariae variabilis aequantibus, bractea hyalina falcata: ovario pedicellato septies breviore, sepalis petalisque subaequalibus ovatis acutis, labello a basi linearicuneato in laminam ovatam refractam acutam seu obtusam producto, utrinque uniplicato pandurato, callo medio emarginato carnoso inter plicas, gynostemio gracili apice utrinque angulato, fovea stigmatica transversa triangula, anthera depressa, medio impressa.

Obs. Forsan huc pertinet:

HEXADESMIA BICORNIS Lindl. B. Reg. XXX. 1544. Misc. 44.

Caulibus fusiformibus elongatis, foliis linearibus oblique bidentatis, floribus subsolitariis cernuis, labello ovato retuso, subserrato, columna utrinque bicorni.

An addition to the insignificant genus Hexadesmia, sent to Mr. Loddiges from Columbia by Linden. It is very like H. fasciculata, but differs in the leaves and column.

1377. PONERA *Lindl.*

Orch. 113.

Lindl. B. Reg. XXVIII. 1842. Misc. 17:

Sepala erecta, carnosa, lateralia majora, basi producta cum pede elongato columnae connata; dorsale planum. Petala ovalia, basi angustata, libera. Labellum cuneatum, bilobum, ascendens, arcuatum, cum basi columnae articulatum, omnino nudum. Columna brevis, teres. Anthera membranacea, depressa, 4-locularis. Pollinia per paria adhaerentia; caudiculis binis pulvereis incumbentibus. Stigma subrotundum, excavatum, subbilabiatum.

Herbae terrestres, gramineae, simplices. Folia linearia, disticha, vaginis verrucosis. Flores fasciculati, terminales (?) in caule folioso, v. axillares in caule defoliato. Ovarium breve, conicum, rectum, sessile.

Represents among Epidendreae the tribe of Malaxeae and Vandeae of which Dendrobium and Maxillaria are respectly the types.

a. Ebulbes distichifoliae.

1. PONERA JUNCIFOLIA LO 113. Lindl. B. Reg. XXVIII, 1842. Misc. 17.

Foliis subulatis canaliculatis secundis, spica subbiflora terminali in caule folioso, labello retuso, clinandrio mutico.

Mexico.

A simple specimen of this rare plant exists in Mr. Lamberts herbar. It has a stem about a span high, and extremely narrow leaves, which in the dried state at least, are all directed towards one side. The flowers are separated from each other by an interval of nearly half an inch.

2. PONERA GRAMINIFOLIA Lindl. B. Reg. XXV. 1839. Misc. 15.

Nemaconia graminifolia Knowles and Westcott Flor. cab. II. 1838. p. 127! Foliis lineari lanceolatis emarginatis, spica subbiflora, terminali, caule folioso, labello oblongo acuto apice recurvo, crenulato, clinandrio mutico.

I presume the trifling differences, which exist between this species and the description in the above work (LO 113) are owing to imperfect observations in the latter case. They have however led Mr. Knowles and Westcott to suppose, that this plant forms a new genus, an error, which I hasten to correct. Having received flowers of it from Mr. Barker I find that it agrees in every essential particular with the structure of *Ponera juncifolia*, so nearly indeed that, if the leaves of the two were not different, some doubt might be entertained of their being specifically different. *P. graminifolia* is a plant of no beauty and is chiefly remarkable for having the scabrous stems, which are so conspicuons in the elegant Arpophyllum spicatum from the same country.

B. Reg. XXVIII. 1842. Misc. 17: Mexico. — A grassy plant of no beauty resembling Ponera striata in the form of its leaves, but diff. in the structure of the flowers.

Floral. Cab. II. 1838. 127. — This is a very singular part, for while in the structure of the sepals, petals and labellum it very nearly approaches the genus Maxillaria, it has pollen and caudiculae of the tribe of Epidendreae. The stems have a very remarkable appearance in not having a solitary leaf, but covered with dusky papillose sheaths. Xalappa. George Barker Esq.

3. PONERA STRIATA Lindl. B. Reg. XXVIII. 1842 sub Misc. 17.

Foliis lineari-lanceolatis oblique emarginatis, spica subbiflora axillari in caule defoliato, labello bilobo integro, clinandrii dente dorsali in antheram incurvo.

Guatemala.

This differs from the preceding in the lip being two-lobed, not acute and recurved, in its margins being entire, and not crenulated, in the anther bed having a dorsal teeth, which curves over the anther, and 2 much smaller blunt teeth on each side of the stigma; it has also the property of flowering on the old leafless stems instead of the young leafy ones. The flowers are pale buff, striped with brownish orange.

Roots of Neottia, a slender stem 3—4' high, unbranched, and covered with narrow grassy leaves, from 4-six inches long, the points of which are obliquely emarginated and the sheaths rough, like those of Arpophyllum with little green or purple tubercles. When old the stems become leafless, are closely covered with ragged sheaths and produce here and there from their axils clusters of 2—3 sessile flowers of a pale buff colour, and less than half an inch long. In form they are exactly like a Maxillaria or a Dendrobium; both sepals and petals being striped with bright reddish brown. The column is short, taper, with a pair of small auricles on each side of the anther bed, and a dorsal tooth curved over the anther, which is membranous, 4 celled, and contains 4 pollenmasses, adhering in pairs by means of single straps of powdery matter. The labellum is wedgeshaped, slightly downy downwards in the middle and twolobed at the apex.

Paxt. Fl. G. II. p. 29. Xyl. 149. Flowers pale green. Guatemala. Grassy leaves upon stems about 2 feet high; and when old throws out its flowers chiefly from the old leafless branches. The flowers are pale watery green, not unlike those of some Maxillaria especially in the extended column base, with which the lip is jointed: but the pollenmasses have the pulverulent caudicles of an Epidendrum. The lip is truncate as it were, and two lobed, the one lobe overlapping the other.

4. PONERA MACROGLOSSA Rchb. fil. in v. Schldl. B. Z. 1852. 639:

Floribus fasciculatis, perigonii phyllo summo oblongo, lateralibus triangulis, mentum prope rectangulum efficientibus, phyllis lateralibus internis unguiculatis, utrinque obtusangulis, obtusis, labello phyllis reliquis longiore basi unguiculato utrinque obtusangulo, apicem versus valde attenuato, bilobulo, lobulo altero alteri imposito.

Nächst *P. striata* Lindl., aber durch Gestalt der Lippe hinlänglich unterschieden. Guatemala. Von Hrn. Van Houtte gezogen. Rchb. fil. Xenia I. p. 44:

Habitus Ponerae striatae. Flores fasciculati solitariive in caulibus post folia disticha dejecta; illos Maxillariae variabilis Bat. subaequantes. Sepalum summum oblongum acutum: sepala lateralia triangula mentum prope rectangulum efficientia. Tepala rhombeo cuneata obtusiuscula. Labellum sepalis longius, rhombeoligulatum, apice exciso bilobum; lobulo altero nunc alteri imposito. Gynostemium crassum breve truncatum; androclinium postice retuso abbreviatoque ligulatum. Fovea semicircularis. Anthera et pollinia exacte Epidendri. l. c. tab. 19. p. 11—16.

5. PONERA PUNCTULATA (floribus terminalibus racemosis). Rchb. fil. Bonpl. III. 220.

Labello cuneato dilatato apice retuso, ante basin obscure trilobo, callo depresso foveato in medio antrorsum in lineas gyrosas exeunte. Caulis pedalis calamum anatinum crassus.

Folialeariligulata apice bidentata, tri—quadripollicaria, tres quatuorve lineas lata. Racemus uniflorus basi vaginis ancipitibus duabus vestitus. Ovarium fusiforme in pedicello elongato. Perigonium illi Ponerae striatae subaequale, alboviridulum punctulis multis atroviolaceis; callis gyrisque labelli flavis. Sepala triangula acuta. Tepala oblonga apiculata. Gynostemium clavatum antice pone stigma utrinque obtuse auriculatum. Aus Venezuela von Hrn. Handelsgärtner Geitner auf den Planitzer Erdbränden eingeführt.

An hujus sectionis? Specimina incompleta:

6. PONERA PLEUROSTACHYS Lind. Rchb. fil. B. II. 282.:

Pedunculo vaginis acutis albis vestito, ramulis flavidis vaginas more E. Blepharistidis perforantibus, ramulis abbreviatis nunc ramulosis, crassis pro pedicellis recipiendis scalari productis, bracteis parvis ovatis acutis, sepalis ovatis acutis, tepalis cuneato-oblongis acutis, duplo angustioribus, labello flabellato apice rotundato bilobulo cum apiculo interposito, gynostemio latissime alato, alis descendentibus.

Adest ramus subbipedalis. Inflorescentia terminalis lateralibus longior, sed simplex: pedunculi excisi rhacheos Hordeinae instar. Flos flavus illo Bletiae floridae paulo minor, cui extus subsimilis, flavus. — Neu-Granada: Ocanna, Teorama. August 4—5000′. Nr. 1196. Schlim.

b. Pseudobulbosae.

Scaphyglottis Pöpp. et Endl. Nov. Gen. et Sp. Plant. 158. Lindl. B. Reg. XXII. 1836. 1901.

Sepala conniventia, lateralia basi paulo producta cum pede columnae connata, labello supposita, supremum lineare convexum. Petala conformia sed paulo breviora. Labellum oblongum canaliculatum cum pede paululum producto columnae continuum eique parallelum, margine leviter repandum. Columna marginata. Pollinia 4 teretia in glandulam cuneatam sessilia. Herbae epiphytae caulescentes, nunc pseudobulbosae in axillis. Folia coriacea, angusta. Flores parvi axillares, pedunculis dense vaginatis.

7. PONERA BEHRII Rchb. fil. Bonpl. III. 220.:

aff. P. roseae: mento obtuso minuto, labello basi cuneato, dein quadrato ante medium utrinque plicula elevata transversa medium versus arato, sepalis petalisque obtuse acutis.

Das vorliegende Exemplar bietet zunächst eine aus 6 Gliedern bestehende spindelförmige 5 Zoll lange Axe, deren oberste und unterste Theile sehr verkürzt. Terminal eine corymböse Traube von 6 weissen Blüthen mit deutlich gestieltem spindelförmigen Fruchtknoten, oblongen spitzen Sepalen mit gekielter Mittelrippe, linealen, spitzen Tepalen, oben beschriebener Lippe. Säule völlig nach Art der Gattung. Eigenthümlich ist die ausgerandete Narbendecke. Bei einer unbekannten Form ohne Anthere würde man aus derselben leicht auf eine vorhanden gewesene Glandula schliessen Das Kinn sehr klein, wie bei P. violacea. Chagres: Dr. med. Behr. Eingeführt durch Hrn. Keferstein.

8. PONERA DUBIA Rchb. fil. Huc:

Isochilus dubius? Rich. et Gal. Annales des sc. naturall. 1845. Jan. p. 23.

Pseudobulbis elongatis apice diphyllis; foliis linearibus crassis obtuse bilobis; floribus 2—3 pedunculatis ex apice pseudobulbi enatis: labello libero ovali subcordato, unguiculato.

Mexico.

Obs. Huc inserenda videtur planta obscura, quae in herbario Ill. Lindley non adest. Nil reperitur nisi icon floris.

ISOCHILUS LIVIDUM Lindl. B. Reg. 1839. XXV. Misc. 45.:

Pseudobulbis fusiformibus attenuatis squamis pallidis membranaceis arcte vestitis, foliis solitariis linearibus apice obscure 2—3dentatis, racemo capillari secundo nutante subtrifloro folio multo breviore, sepalis petalisque ovatis concavis patulis, labello cordato revoluto apice foveato basi mellifluo.

A small dingy flowered plant imported from Mexico by George Barker, Esq. of Birmingham. Its livid semitransparent flowers, and slender pedicels, are accompanied by spindleshaped pseudobulbs tightly covered with sheaths, resembling in colour the external skin of the onion which gardeners call: „the silverskinned."

9. PONERA VIOLACEA Rchb. fil. Bpl. II. 22. :

Caule crasso fusiformi, articulato, articulis diphyllis, foliis lineariligulatis angustis apice valde attenuatis, ramulis fusiformibus, fasciculis florum basi a squamis vestitorum terminalibus in articulis, sepalis oblongoligulatis, tepalis angustioribus, labello ligulato, supra basin utrinque plicato constricto, hinc quasi pandurato, apicem versus nunc angustiore, hinc quasi trilobo, apice bilobulo, gynostemio semitereti gracili apice oblique deciso, fovea stigmatica semilunari. Certissime Epidendrea. In horto bot. Berolinensi. Praeter pollinia bene quadrat cum Sc. violacea Hook. B. Mag. nec cum icone in B. Reg. 1901.

Huc ? *Scaphyglottis violacea* Lindl. Lindl. B. Reg. 1836. XXII. 1901.

Pseudobulbis nullis, foliis linearibus apice emarginatis, floribus subgeminis, labello lineari apiculato leviter repando. Cladobium violaceum. Lindl. Nat. syst. of Bat. 4.

Caules teretes, striati, articulati, verosimiliter penduli, ad nodos prolliferi. Folia 2—3 pollices longa, linearia v. lineari-lanceolata, emarginata, forte in pseudobulbos insidentia, dum planta vegetior pullulat. Flores minuti violacei, pedunculi dense vaginati, brevissimi, geminati. Sepala lateralia basi producta et obliqua, supremo lineari duplo latiora. Petala suprema conformia, sed paulo breviora et minus colorata. Labellum album, cum basi leviter producta columnae continuum, carnosum, canaliculatum, lineare, apiculatum, apice purpurascens, margine leviter repandum ideoque subtrilobum. Columna semiteres, alba, apice utrinque unidentata. Pollinia 4, distincta, in glandula triangulari sessilia. — Demerara Lodd. imp.

10. PONERA ROSEA Rchb. fil. in Bonpl. II. 22. Huc: *Scaphyglottis rosea* Hook. Ic. Plant. IV. (1841). tb. 313.

Pseudobulbis elongato-cylindraceis sulcatis proliferis, foliis linearibus obtusis, floribus geminatis, labello obovato, spathulato, apice recurvo trilobo lobo medio acuminato. Hab. Demerara C. S. Parker Esq.

Near *S. violacea* Lindl. but as we examined this in a living state we pronounce it distinct. The flowers of this are of a much paler hue, the sepals and petals of an uniform rose colour: but the chief characteristical lies in the labellum, which is here attenuated below into a long narrow claw, while the upper half is curved down, the apex 3lobed, the middle coming to a rather sharp point. The habit of this genus is peculiar in its proliferous pseudobulbs: but the structure of the flowers seem to me scarcely differing from that of Maxillaria.

11. PONERA LEUCANTHA (Scaphyglottis leucantha Rchb. fil.): Rchb. fil. Bpl. II. 22.

Caulibus flaccidis teretiusculis, longiarticulatis, basi 1—2 vaginatis, vaginis membranaceis elongatis, apicibus articulorum diphyllis, foliis ligulatis apice acutiusculo bilobis, basi cuneatis, fasciculo florum terminali(?), articulo insequenti ex axilla alterius folii, seu ubi duae gemmae adsunt, dichotomia effecta, articulis duobus, flosculis minutis, mento valido, sepalis lanceolatis acutis, tepalis linearibus acutis, labello a basi cuneata flabellato, apice obsolete trilobulo, gynostemio gracili clavato medio sulcato, angulo utroque ex sulco longitudinali quadrialato.

Ornithidium sp. Merida: Jaji. 7000'. Funck und Schlim. 1185. Rchb. fil. Xenia I. p. 43. Tab. 19. IV, 7—10.

Scaphyglottis leucantha Rchb. fil. Var. *uniflora* Rgl. (*S. violacea* H. Petrop.) Ind. sem. hort. Petr. 1855.:

Caulis compresso-cylindricus, articulatus, vaginatus; vaginis membranaceis, striato-nervosis, junioribus acutis. Folia in apice articulorum sessilia, lineari-lanceolata, apice emarginato biloba. Flores axillares, solitarii, nutantes, albi, rubro punctulati; sepalis ovato-oblongis, acutis, erecto-patentibus, lineas 2 longis; petalis paullo minoribus, oblongo-

lanceolatis. Labellum lineam longum, basi unguiculo canaliculato instructum, apice in laminam rotundato-triangularem obscure trilobam dilatata.

Forma genuina ab planta nostra foliis oblongis et floribus aggregatis differre videtur.

12. PONERA STELLATA Rchb. fil. Mss. Huc: *Scaphyglottis stellata* Lodd. in litt. B. Reg. XXV. 1839. Misc. 60.

Pseudobulbis fusiformibus, foliis linearibus canaliculatis obtusis emarginatis, fasciculis sessilibus terminalibus, sepalis linearibus secundis patentibus, petalis conformibus angustioribus, labello cuneato trilobo, lobis lateralibus rotundatis, intermedio acutiusculo.

This species nearly resembles S. violacea, (B. R. t. 1901) from which it differs in having larger flowers with spreading sements, ad the lateral lobes of the lip as large as the middle lobe. A native of Demerara, whence it was obtained by Mrs. Loddiges.

13. PONERA PROLIFERA Rchb. fil. in Seemann Bonpl. II. 22. *Isochilus proliferum* RBr.

14. PONERA CONFERTA Rchb. fil. l. c. *Scaphyglottis conferta* Endl. Pöpp.

Obs. Rchb. fil. Bpl. II. 22. Höchst wahrscheinlich gehören auch hierher: *Scaphyglottis affinis* Endl. Pöpp., *Sc. graminifolia* Endl. Pöpp.

Obs. Planta, quam non vidi in herbario ill. Lindley, mihi satis superque obscura: *Scaphyglottis reflexa* Lindl. B. Reg. XXV. 1839. Misc. 21.

Foliis semiteretibus supra glabris sulcatis apice integerrimis, sepalis lateralibus ovato-triangularibus reflexis, petalis linearibus obtusis, labello oblongo emarginato obtusissimo undulato medio refracto.

A branching, straggling plant with slender leaves, and solitary, pale, dull yellow flowers, with a crimson stain along the middle of the lip. Like the rest of the genus it is a species quite destitute of beauty. It was obtained by Mrs. Loddiges from Demerara.

Species exclusae

SCAPHYGLOTHIS RUBERRIMA Lindl. = *Ornithidium ruberrimum*.

SCAPHYGLOTHIS? FASCICULATA Hook. cf. *Hexadenias*.

1382. LEPTOTES *Lindl.*

B. Reg. XIX. 1625

Sepala et petala linearia, subaequalia, patentia; labellum posticum, trilobum, cum columna parallelum, laciniis lateralibus nanis circa columnam convolutis, intermedia oblonga marginibus reflexis; columna brevis, crassa, semiteres; anthera hemisphaerica, bifida; pollinia 6, incumbentia, quorum 2 superiora pyriformia obliqua compressa, 4 inferiora inaequalia tenuiora, anterioribus duplo minoribus. Caules breves, teretes, squamis vaginati. Folia teretia

1. LEPTOTES BICOLOR Lindl. l. c. B. Reg. XXVI. 1840. p. 14. in Misc.:

Fruit aromatic! Professor Morren has ascertained, that the fruit is aromatic, when ripe. He fertilized twice artificially the flower and obtained its fruit, which he describes as resembling in smell the well-known Tonka or Tonquin bean of the perfumers, or the sweet vernal grass (Anthoxanthum odoratum), which aromatises hey, only stronger and more penetrating than the last. It has been found, that this fruit infused in cream or milk gives them, when iced, a mild agreeable flavour, sweeter, than Vanilla, but less penetrating. „L'homme", adds the author" est avide des „variétés dans sa nourriture; l'art culinaire trouve ici un moyen de plus de con-

„tenter ses goûts capricieux et l'art du glacier, de diminuer chez ses produits cet „ennui, qui dit on, naquit de l'uniformité".

B. Mag. 40. 3784. —

Obs. Me judice huc pertinet:

LEPTOTES SERRULATA Lindl. Sect. II. (1838).

Caule subdiphyllo, foliis glaucis, maculosis, labelli lobo medio oblongo lanceolato acuminato, lateralibus rotundatis serrulatis.

Epidendrum ficoide Desc. drawings, plate 28. p. 68.

Glaucous. Flowers 3—4 times as large as of bicolor, labellum merely streaked with rays of purple.

Descourtilz: Lilac, sweet. Decb. on the trunks of Cedrela trees in the ancient Rocas of Brazil, where it survives the conflagrations', that destroy so many other plants. I also found it in plenty in the district of Upper Macahe and in that of Ilha Grande, where it is rare. Stems cylindrical, creeping, covered with a dry, silvery, smooth membrane. Leaves cylindrical, thick, succulent, fusiform, deeply chanelled on the upper side, glaucous green or bluish, dotted with violet purple, especially underneath. There is a var. with the leaves twice as long and falcate. The scapes are cylindrical, both terminal and axillary, bright purple, covered with acute, alternating bracts. Ovary very long, united into a drooping raceme. The flowerbuds are of a yellowish rose, protuberant at their base. Flowers very large, stellate. Sepals ribbonshaped, rather broad, and white as the purest enemal; petals narrower and thinner. The lip has at its base two short rounded auricles; otherwise it is strapshaped at the base with a white centre, whence there radiate numerous lines of the most brillant lilac and is afterwards dilatated into an ovate pointed or lanceolate limb of a beautiful white.

1384. SPATHOGLOTTIS *Blume.*

Bijdr. 400.

1. SPATHOGLOTTIS PLICATA Blume Bijdr p. 401. t. 76. B. Reg. XXX. 1344. Misc. 56. Mr. Loddiges received it from Penang. It has light purple flowers and has quite the appearance of Paxtonia.

2. SPATHOGLOTTIS LOBBII Rchb. fil. Mss.:

Sepalis oblongis obtuse acutis, tepalis latioribus obtuse acutis, labelli segmentis posticis semiovatis, ungue brevi apice in laminam obcordatam expanso segmentis posticis prope aequilato, lamellis didymis planis ovatis extus villosis, auriculis antepositis triangulis villosis, columna partitionibus labelli posticis aequilonga. Ind. or. Lobb. (Klassiya?)

3. SPATHOGLOTTIS TOMENTOSA Lindl. B. Reg. XXXI. 1845. sub 19.:

Foliis binis latolanceolatis scapo tomentoso longioribus, racemo tomentoso multifloro, bracteis obtusissimis concavis rigidis, velutinis pedicellis multo brevioribus, sepalis petalisque obtusissimis his latioribus, labelli laciniis lateralibus erectis lineari-oblongis truncatis intermedia apice reniformi ungue elongato lineari angustissimo basi hastato, lamellis ad basin lanceolatis semiconnatis erectis, columna angusta elongata.

Mindanao in the province of Miscamis Manillae. 20 fl. in the raceme and the stems and bracts coated with a close fur.

4. SPATHOGLOTTIS AUREA Lindl. in Paxt. Fl. Gard. I. p. 16.:

Flowers yellow. Rather handsome, with narrow leaves like those of a Phajus and a scape 2' high, bearing at the very end about half a dozen of large golden-yellow flowers with a few dull sanguine spots on the lip. Lobb found it on Mount Ophir near Nepenthes sanguinea. According Mr. Griffith it inhabits rocks on M. Ophir at places called Goonory, Toondock, Laydang. J. H. S. V. p. 34.

5. SPATHOGLOTTIS AFFINIS De Vriese Illustr. t. 15:

Tuberibus crassis, compressis, validis, laevibus; foliis ensiformibus, lineari-lanceolatis, plicatis, acuminatis, multinerviis, pedalibus et ultra, petiolatis, petiolo vagina oblongo-lanceolata, plicata instructo; scapo in singuli tuberis extremitate laterali et attenuato, sesquipedali; bracteato; racemis erectis, multifloris, pedunculis fere pollicaribus, erectis, bracteolatis; bracteolis linearibus; flore flavo; sepalis ovatis, obtusis, late patentibus; petalis lateralibus haec subaequantibus; labello trilobo, lobo medio majore, elongato, fere obcordato, apice valde emarginato, basi contracto, lobis lateralibus fere triangularibus, ad basin peculiari gibbositate instructis; ovario pedunculo multo minore, glabro.

Species exclusae.

SPATHOGLOTTIS FORTUNEI Lindl. = *Pachystoma Fortunei.*

SPATHOGLOTTIS PARVIFOLIA Lindl. = *Pachystoma parvifolium.*

SPATHOGLOTTIS PUBESCENS Lindl. = *Pachystoma.*

Huc? PAXTONIA Lindl. B. Reg. 1838. XXIV. Misc. 113. Tab. 61.

Perianthium 6 phyllum, petaloideum, patens, aequale. Columna libera clavata semiteres. Pollinia 8, angusta, clavata, cohaerentia. Stigma verticale rimo transverso sub rostello. — Herba caespitosa, pseudobulbosa-foliis plicatis, racemo multifloro, radicali, foliorum longitudine.

The leaves are long, narrow, and sligthly plaited, and proceed from an oblong pseudobulb, which is marked with circular scars indicating whence, they fall. The flowers are a purplish-lilac, rather larger than a shilling, and grow upon a stem about a foot high, in a somewhat corymbose raceme· They look like those of a Thelymitra, but the structure of their column is entirely different.

PAXTONIA ROSEA Lindl. B. Reg. XXIV. 1838. 60.

Pseudobulbi dense aggregati, oblongi, cicatricibus foliorum annulatis, 3 phylli. Folia lanceolata, plicata, basi angustata, subpedalia, basi squamis ovatis concavis acutis fuscis vaginata. Scapus erectus, radicalis, foliorum longitudine calami scriptorii crassitudine, squamis 2—3 ovatis distantibus vaginatus. Bracteae ovatae, acutae, patulae, pedicellorum longitudine. Flores rosei, fere sesquiunciam lati; pedicellis gracilibus ovarii longitudine. Sepala et petala conformia, aequalia, oblonga, acuta, 3—4''' lata; labello antico. Columna erecta, teres, antice paulo complanata, apice suclavata, rosea, petalis brevior; clinandrii margines crassi sublobati. Manilla. Mr. Hugh Cuming.

Planta disparuit, quae forsan extra Manillam nullibi nisi in herbario Lindleyano et meo reperienda. Ipse vivam cultam ante sedecim annos Lipsiae vidi florentem. Ill. Lindley nuper suspicatus est, Spathoglottidis esse peloriam, quod ex quo quando confirmatum erit nec ne, acerrimum seu phantasticissimum.

1387. ARUNDINA *Bl.*

Bij. Nr. 401.

1. ARUNDINA DENSA Lindl. B. Reg. XXVIII. 1842. Misc. 26:

Labello obovato-subrotundo quadrilobo apiculato laciniis rotundatis, lamellis 3 subaequalibus crispatis rectis, petalis oblongis foliis subaequalibus.

Sincapore. Cuming.

Flowers as large as these of A. bambusifolia, rosy violet, with crimson-bordered lip, sweetscented and very handsome, forming a close head and not a long loose raceme.

It differs from A. bambusifolia in its leaves being nearly equal, and not gradually diminishing into small sheaths as they approach the flowers; and in the flowers being very closely, but loosely, arranged; and in the small size of the middle lobe of the lip, which is almost blended with the large lateral lobes. There is a difference too in the crested veins of the lip, which are all three crisped in A. densa, while the middle one is straight and even in A. bambusifolia. B. Reg. XXVIII. 1842. 38.

2. ARUNDINA CHINENSIS (Bl. Bijdr. 402 ?) Lindl. Herb. — Hook et Arnott Beecheys Voy. p. 217 (1841.) China. Canton Vacchell 182. — Lindl. in Hook. Journ. VII. 34: „Common in Hongkong Champion."

3. ARUNDINA PHILIPPII Rchb. fil. in v. Schlchd. Linnaea XXV. p. 227:

Perigonii phyllis externis oblongis acutis, perygonii phyllis lateralibus internis cuneato-ovatis acutis, tenuius membranaceis, labello cuneato, medio trilobo, lobis lateralibus obtuse triangulis, undulatis, lobo medio producto oblongo, seu obreniformi, apice emarginato, praeterea crispulo, lineis tribus carinatis basi ad radicem lobi medii integris, antice autem crenulatis, androclinii cucullo acutiusculo, margine integro. China.

Rchb. fil. Bonpl. III. 250, l. c.:

Aff. A. chinensi Bl. labello medio trilobo, lobis lateralibus obtusangulis, lobo medio oblongo, carinis ternis per discum, androclinio cucullato. Arundina chinensis Lindl. in Florula Hongk?

Planta humilis. Folia linearilancea. Pedunculus apice parviflorus. Bracteae triangulae vulgo minutae. Sepala lancea. Tepala cuneato ovata acuta. Hongkong Hance! Seemann!

4. ARUNDINA MEYENII Rchb. fil. Linn. l. c.:

Perigonii phyllis lanceolatis acutis, subaequalibus, labello a cuneata basi dilatato, apicem versus trilobo, lobis lateralibus obtuse triangulis, medio lobo a cuneata basi dilatato, bilobo, cum reliquis margine crispulo crenulato, lamellis duabus basilaribus erectis, crenulatis, versus medium labellum omnino evanescentibus, gynostemii validioris cucullo androclinii tridentato, dente medio obtuso.

Cymbidium Meyenii Schauer Act. Leop. Suppl. XIX. 433. 1844.

Caule stricto, foliis vaginis continuis gramineis lineari acuminatis distichis, spica terminali pauciflora bracteis brevibus cucullatis, sepalis petalisque patulis subaequalibus elongato-lanceolatis acuminatis, labello amplo, concavo superne trilobo, lobo terminali bilobo cum dente interposito: lamellis disci duabus parallelis linearibus.

China: Macao. September.

Adest specimen unicum floribus 2 polline destitutis. Foliorum lamina nervoso lineata apicemque versus acute carinata 6 pollices circiter longitudine metitus. Flores conspicui, purpurei; ovarium pollicare, perigonio haud multum brevius. Labellum explicatum semipollicem latum, sepala tantillo superans. Columna versus apicem marginata.

5. ARUNDINA PULCHELLA Tijsm. and Binnendyk. Naturk. Tijdk. Nederl. Ind. V. 1853.

Foliis lanceolatis acuminatis plicatis 8-9 nerviis, scapis 3 floris, phyllis perigonii lanceolatis, labelli trilobi lobo medio undulato emarginato, lateralibus undulatis acutis.

6. ARUNDINA BAMBUSAEFOLIA Lindl. O. 125: B. Reg. XXVII. 1841. Misc. 5.:

Fol. habit of Bamboo, flowers of Cattleya. A native of the hotter parts of India especially of the Assam and the Burmese territories. Roxburgh speaks of the blossoms as numerous, large, rosy, with the lip of a lively red purple and very beautiful. He also says, that the stems are, when in flower, 3, 4 — 5' high. Flowered with

Loddiges. Its natural station is said to be well shaded places, on the face of moist rocks.

Wight Icon. V. 1185. *Arundina bambusifolia* Lindl.

Lip furnished within with 2 fleshy undulated crested plates, and a shorter straight intermediate one: lateral lobes short, entire subobsolete, middle one twolobed, segments divaricating, crisp: petals lanceolate, leaves acuminate.

Ceylon. — Malabar. Nepauls.

1388. PHAJUS *Lour.*

Fl. Cochinch. II. 529.

1. PHAJUS BICOLOR Lindl. O. 128. Sert. 25.:

Dry pastures on the sides of high hills near Peradenia. Ceylon. Novbr. Macrae. Walker (possid. Hook. icon. Walk.)

Rhizome fleshy, knobby, like that of an Iris. Leaves 1½'. not taper in a petiol but rolled each round other. Flower stem 2' high. naked at the lower part, but at the upper end covered by large, yellow and crimson flowers 4'' diam. Bracts large, oblong, concave, thrown off as the flowers expand. Sepals and petals linearlanceolate. Lip much broader, oblong, rolled round the column, much undulated at the edges, curved downwards at the upper end with a pink limb and a yellow tube; at its base lengthened into a curved horn, which is emarginate at the point, about ⅓ the length of itself. Flowers do not appear to be fragrant. An other variety with every part yellow except the lip exists according a drawing.

B. Reg. XXV. 1839. Misc. 91.

Loddiges flowered it, imported from Ceylon. Sepals and petals are in that island a very bright deep red, and the lip is yellow; but owing the unhealthiness or some other cause the colours of Mrs. Lodd. plant were by no means of their native brilliancy: for it is certain that they are fully as bright and rich as in the fig. of Sert Orchid.

Wight Ic. V. 1659. 1660.

Ceylon. Walk. 2 col! one alike Lindley's, the other has the sepals and petals purplish above, brownish pale white beneath, the lip externally pale brownish yellow within rose.

2. PHAJUS TETRAGONUS Rchb. fil. Bonpl. III. 221. = *Pesomeria tetragona* Lindl. B. Reg XXIV. 1838. Misc. 6.

Sepala subaequalia, libera, sponte decidua. Petala conformia, basi columnae adnata, persistentia. Labellum posticum, cum columna connatum, basi gibbosum, limbo indiviso convoluto. Columna clavata, semiteres clinandrio dentato. Poll. 4, cuneata.

Herba terrestris, caule tetragono; foliis membranaceis plicatis; racemo laterali simplici, bracteis sponte secedentibus; radicibus crassis, simplicibus, fibrosis.

Ph. tetragona l. c.

Epidendrum tetragonum Thomas Orch. Afr.

Sepala carnosa, patula, oblonga, carinato-acuminata, luteo viridia, intus fusca, lineis intensioribus, omino libera, aequalia, sponte decidua! fere pollicem longa, 3''' lata. Petala aliquoties breviora et angustiora, obovata, acutissime intus luteo fusca, cum columna parallela ejusque basi utrinque adnata, haud decidua. Labellum posticum, convolutum, carnosum, cum columna semiconnatum, ima basi gibbosum, cuniculo intus pubescente; lamina obscura lutea, venis divergentibus fusco-purpureis, latior quam longa, apice cuspidata et crispa, intus sparse villosa, linea media elevata late carnosa sursum sulcata. Columna clavata semiteres, clinandrio dentata. Stigma lunatum, rostella plicato? Anthera obtuse conica, pilis albis erectis villosa, apice membranacea

bidentata, tuberosa, obsolete 8-locellaris. Pollinia 4, cereacea, materia pulverulenta elastica cohaerentia (ulterius indaganda).

B. Mag. 4442.

3. PHAJUS WALLICHII Lindl. in Wall. pl. as rar. t. 158. B. Reg. XXV. 1839. Misc. 58.: Chatsworth coll introd. by Mr. Gibson. The specimen sent me was a good deal (damaged, but it appears to be as stately and beautiful a plant as the common P. grandifolius. Lindl. in Hook. Journ. Bot. VII. 34.

4. PHAJUS GRANDIFOLIUS Lour. Rchb. fil. Bonpl. 250. Hongkong. Hance! Lindl. Hook. Journ. VII. 34.

„Hongkong. This magnificent Orchid is commen by the sides of the streems. Flowering in April. Var. superbus Van Houtte: flore des Serres VII. 738.

5. PHAJUS AUSTRALIS F. Müller Fragm. Physog. 1858. p. 42.:

Sepalis petalisque lanceolatis acutis intus coloratis, labello sepalis aequilongo late ovato cucullato antice undulato et obscure trilobo supra parce puberulo uninervio et bicarinato, calcaris subrecti obtusi longitudinem quinquies excedente: lobo medio fere semiorbiculari, germine calcar duplo superante, columna dimidio labelli aequilonga puberula.

In Australia orientali subtropica.

Folia circiter 2 poll. lata. Flores iis Phaji grandiflori minores. Sepala subaequalia 1—$1^3/_4$ poll. longa, circiter 4 lin. lata, extus albida, intus fuscorubra nitentia nec ut in Ph. grandifloro opaca, striis saepe flavidis lineata. Labellum intus fusco-rubrum, secus axin carinasque flavidum, venis divergentibus flavescentibus notatum, apice pallide flavum v. erubescens. Calcar tenui-conicum. Columna pallida semicylindracea dimidium neque trientem tantum labelli aequans. Phajo Blumei habeo proximum.

Obs. F. Müll. narr. of Kennedys expedition 33: „Lady Elliots Island off. Wide Bay. — Phajus Carroni, remarkable for its long spur compared to the two other australian species was found by Mr. Will. Carron in the vicinity of Rockinghan Bay.

Obs. 2. Nescio cui referendus sit:

PHAJUS GRANDIFLORUS Lour. B. Reg. XXV. 1839. Misc. 40.

„This plant I discovered in Sept. 1824. growing in extensive swamps at the back of the beach, on the shores of Moreton Bay, in lat $27^1/_2$, from whence I sent a large tuber of the plant to Kew, where on flowering it proved to be identical with the old Limodorum Tankervilliae, and of its flower M. Bauer made a drawing. Moreton Bay therefore is another locality. New South Wales.“ All. Cunningham.

6. PHAJUS CALLOSUS Bl. — Gardn. Chron. 1848. 28. l. c. Xyl.:

Flowers dull reddish brown, just tipped with dirty white. Lip is white, with a tinge of pink, a dark purple spot beneath and a little yellow on the twolobed spur. Its end is truncate, or almost twolobed, with a thick, callous line, which passes downwards, along the middle loosing itself in the part which is rolled up.

7. PHAJUS BLUMEI Lindl. de Vriese Illustr. t. 8. et t. 11. f. 8.

8. PHAJUS INDIGOFERUS Hask H. Bog. 42.:

Caulescens; foliolis perigonii patulis conniventibus obtusiusculis, labello intus bicarinato subtrilobo, lobo medio emarginato; columna subnuda.

Obs. Non diagnosis, non descriptio — verba.

9. PHAJUS CUPREUS Rchb. fil. Bonpl. III. 220.:

aff. maculato labello transverse triangulo apice trilobo, lobis lateralibus obtusangulis, lobo medio paulo producto oblongo bilobo margine crenulato, linea pilosa a medio disco usque ante apicem. Perigonium cupreum: labellum album. Flos illi Phaji maculati paulo major. Sepala

oblongo ligulata linea media extus carinata, tepala angustiora ecarinata margine undulata.

Aus Java? eingeführt von Hrn. Consul Schiller, cultivirt von Hrn. Stange.

10. PHAJUS MACULATUS Lindl. B. Mag. 3960:

Caulescens, foliis ovato-lanceolatis acuminatis maculatis, sepalis petalisque oblongis obtusis, labelli trilobi lobis apice plicato crenatis, lateralibus rotundatis, intermedio ovato obtuso multo minoribus, calcare recto oblongo obtuso.

Ph. macul. Lindl. Wall. Cat. Herb. Ind. n. 3748. Lodd. Bot. Cab. t. 1808 Lindl. gen. Sp. p. 126.

Bletia flava Wall. in Bibl. Anglic. Ind. Ic. 1147. (fide Lindl.)

Bletia Woodfordi Hook. B. Mag. t. 2719.

(β) minor: foliis totis viridibus.

Tab. 2719 is represented from a drawing by Mr. Alton, but not well. I was led into the error of considering it a native of Trinidad and communicated by Sir Ralph Woodford to the Royal Gardens at Kew. It is of Indian origin and our present drawing was made from one of the many fine plants sent to Kew by Dr. Wallich and which flowers more or less copiously all winter through. It would be included in Bletia of Brown and other authors; but it differs from the true Bletiae in having a spur to the lip, and that lip connate with the base of the column, not articulated upon it.

Like some yellow flowered plants (the Primulaceae for example) the bracteas and flowers become of a deep verdigreen in decey. Any part of the plant introduced in the mouth produce after some minutes a pungent and sensible heat like the acrid leaves of some Aroideae.

Perianthium flavum, labellum margine aurantiacum.

Species exclusae.

PHAJUS ALBUS Lindl. = *Thunia alba* Rchb. fil.

PHAJUS ROSELLUS Lem. = *Galeandra juncea* Lindl.

1388. PREPTANTHE *Rchb. fil.*

in Van Houtt. Fl. des Serres VIII. 840.

Recedit a genere Phajo columnae compressae rostello profunde bilobo.

1. PREPTANTHE VESTITA Rchb. fil. l. c. *Calanthe vestita* Lindl. Lem. Jard. Fl. 333. B. Mag. 4671. Lindl. Paxt. Fl. G. III. 38. xyl. Van Houtt. Fl. d. Serres VIII. 816. Wight Ic. VI. t. 1751. 52:

Cytheris Griffithii RW.

Scape erect hairy, many flowered, leaves bracts, ovato lanceolate, acute, externally hairy, spur slender annularly involute, lip spreading, 3lobed, lateral lobes obtuse, smaller than the dilated obcordate middle one. Pseudobulb ovate; scape from 1½ to 2 feet high, furnished towards the base with a few sheathing scales: flowers large, pedicels slender, longer than the bracts. There are no leaves attached to the specimens. Mergui Griffith. Very distinguished from *Cytheris cordifolia* Lindl.

1389/1. ACANTHEPHIPPIUM *Blume.*

Bijdr. 353.

1. ACANTHEPHIPPIUM JAVANICUM Bl. B. Mag. 4492.

2. ACANTHEPHIPPIUM STRIATUM Lindl. B. Reg. 1838. XXIV. Misc. 68:

Petalis oblongis acutis sepalisque apice revolutis, labelli lobis lateralibus rotundatis, intermedio acuto carnoso utrinque plicato, disci callo solitario elevato longitudinali.

Mr. Bateman received it as a Nepal plant from Her Majesty's Bot. Gard. at Kew. Very inferior in appearance to Acanth. bicolor, having pale „french white" flowers with dull longitudinal stripes and not a single stain of brilliant colour. Flowers are smaller than in the species just mentioned and their lower sepals are so much contracted into a pouch at the bend of the column foot, as almost to form a spur; the labellum has long rounded side lobes, a small contracted, tawny, spotted, acute middle lobe, and a single elevated callosity running down its middle. Mr. Bateman adds, that it has larger, narrower, and more attenuated pseudobulbs, a three flowered scape and leaves like those of A. bicolor. I take this opportunity of stating, that the genus of Ac. does not belong to Vandeae, as I formerly supposed, from the examination of imperfect specimens, but in reality should be stationed in Epidendreae, where it represent, the Maxillaria of Vandeae, and the Dendrobium of Malaxeae an interesting fact with reference to systematical purposes. It should be placed near Bletia and Phajus.

3. ACANTHEPHIPPIUM BICOLOR Lindl. B. Reg. XX. 1835. 1730:

Petalis oblongo-lanceolatis acutiusculis, labelli lobis lateralibus rotundatis, perianthio ovato. — Planta terrestris, pseudobulbis oblongo-ovatis, corrugatis, atro viridibus, reliquiis foliorum vestitis, paulo in collum angustatis. Folia 2—3, oblongo lanceolata, utrinque acuta, plicata, erecta, basi angustata, sed petiolo nullo. Pedunculus radicalis; squamis ovatis, concavis, brunneis, magnis, vaginatis, 2—4florus. Perianthium carnosum, sepala obtusa, lateralia basi obliqua, basi longe productae columnae inserta. Petala aequilonga, apice minus maculata, lineari-oblonga acuta. Labellum cum pede longo columnae unguem efficiente articulatum, inflexum complicatum, trilobum, lobis lateralibus rotundatis, intermedio magis luteo et carnoso, asperiusculo; lamellis disci tantum concavis, linea elevata sejunctis. Columna semiteres, acuta; stigmate marginato, clinandrio immarginato proclivi. Pollinia 8, geminata in glandulam antice emarginatam sessilia.

Ceylon, found by Watson, the Superintentend of the Government Garden of Peradenia.

Obs. Adest quaedam paraphrasis, quae certe nec inter diagnoses, nec inter descriptiones habebitur:

ACANTHEPHIPPIUM PARVIFLORUM Hassk. H. Bog. 43;

Perigonio mediocri pallescente, limbo lurido-sanguineo, labello flavescente.

1389/a. CRYPTOCHILUS *Wall.*

Tent. 36.

1. CRYPTOCHILUS SANGUINEA Wall. l. c. t. 36: Lindl. Bot. Reg. XXIV. 1838. Misc. 23. Omnia = LO. 193 praeter ·

Pollinia 8, paribus 4 materiei pulvereae adhaerentia.

Wallichs collector sent it from the lacher mountains on the frontier of Sylhett. 1837. Loddig. When this genus was placed in the genera and species of Orch. plants, I had only examined a young dried bud, and I had been led to suppose it a member of the section called Vandeae, but the recent plant shows that it in fact belongs to Epidendreae, and that it most be placed along with Acanthephippium in the neighbourhood of Phajus and Bletia.

Perigonium scarlatinum, margine violaceum.

Wight Ic. V. I. 1851. 1757:

Khassia Mountains. Griffith. Inferior to that figured by Dr. Wallich in his tentamen nepaulense.

1393. PACHYSTOMA Bl.

Tab. XXIX.

Apaturia Lindl. O. 130. *Ipsea* Lindl. O. 124.

Rchb. fil. Bonpl. III. 250:

Genus affine Bletiae ac Spathoglottidi gynostemio arcuato basi in pedem producto connatum cum sacculo basilari labelli dein explanati. Plantae habitu Pogonias quasdam multifloras simulantes. — „Radices irregulariter nodoso incrassatae" repentes. (Falconer in Hook B. Journ. IV. 74.)

a. Tepala spathulata

— Macranthae. —

1. PACHYSTOMA SPECIOSUM Rchb. fil. Bonpl. III. 250:

Labello medio trilobo, lobis lateralibus obtuse quadratis, lobo medio ovatoligulato acuto, lamellis quinis elevatis. Ipsea speciosa Lindl. O. 124. Wight Ic. 1663. Pedunculus uni — biflorus longe extensus velutinus, flores extus velutini. Sepala oblonga acuta. Gynostemium gracile apice utrinque quadrato alatum, rostellum quadratum productum. Zeylona.

Wight l. c.: „said by Lindley to have roots of an Orchis. The figure from Col. Walker does not exhibit that feature."

2. PACHYSTOMA MALABARICUM Rchb. fil. Mss.:

Labello medio trilobo, lobis lateralibus triangulis, lobo medio obovato emarginato denticulato, lamellis 5 serratis a basi in medium lobi medii, media ulterius excurrente. Reliqua praecedentis. Malabar. Jerdon!

— Micranthae. —

3. PACHYSTOMA SMITHIANUM Rchb. fil. Bonpl. III. 251:

„Labelli lobis lateralibus obtusis, intermedio subrotundo emarginato: lineis quinque elevatis, undulatis, intermedio lobo medio clavatim desinentibus"

Apaturia Smithiana Lindl. Orchid. 131. Pedunculus sesquipedalis; multiflorus. Bracteae subulatae longissimae. Sepala 4 lineas longa, ovata, acuta, subaequalia. Kudjuree-ghaut in regno Oude: Wallich.

4. PACHYSTOMA PARVIFOLIUM. Huc: *Spathoglottis parvifolia* Lindl. Bot. Reg. XXXI. 1845 sub 19:

Foliis solitariis gramineis scapo pubescente multo brevioribus, racemo 3 floro pubescente, bracteis acuminatis, glabriusculis, pedicellis brevioribus, sepalis ovatis acutis, petalis oblongis manifeste unguiculatis, labelli laciniis lateralibus oblongis erectis intermedia lineari subcuneata indivisa, lamellis 3 basi glabris, lateralibus truncatis, intermedia filiformi, columna angusta elongata. Flores flavi.

Khassiya hills. Griffith.

c. Tepala linearia.

aa. Labelli lobus medius acutus.

5. PACHYSTOMA LINDLEYANUM Rchb. fil. l. c.

Tuberculis per lobum medium labelli triseriatis. Apaturia Lindleyana Wight Ic. 1662. Planta pedalis vaginis acutis vestita. Bracteae lan-

ceolatae ovaria aequantes per racemum pluriflorum quaquaversum. Sepala lanceolata acuta extus velutina. Tepala linearia acuta. Labellum cuneato oblongum, medio trilobum, lobi laterales semiovati abbreviati. Coorg. Jerdon.

Huc Wight l. c.: *Apaturia Lindleyana* RW.:

Petals linear, subspathulate, equalling the oblong linear lanceolate acute sepals, lateral lobes of the lip obtuse roundish. middle one ovate, straight, with 3 crests extending nearly its whole length and decurrent on the claw: the middle one thicker and higher, than the others, lateral one not marginal, bracts as long as ovary, ovate, cucullate, acute.

Coorg. Jerdon.

Too near *A. senilis* Lindl.

5. PACHYSTOMA CHINENSE Rchb. fil. l. c.:

Tuberculis per venas quinas intimas labelli a basi in apicem.

Apaturia chinensis Lindl. Orchid. 131.

Caules graciles multivaginati; vaginis scariosis acutis. Spica pluriflora subsecunda. Bracteae lanceolatae cristatae erectae ovariis pedicellatis puberulis horizontalibus aequales. Sepala lanceolata acuta. Tepala linearia acuta. Labellum flabellatum, antice trilobum, lobi laterales semiovati, lobus medius lanceus.

Rchb. fil. Bonpl. III. 250. Hongkong. Seemann! Hance!

Lindl. in Hook. Journ. VII. 35: In marshy spots on the top of Mount Gough. Flowering in April. — The flowers are of a light lilac and canescently pubescent, the lip yellow. Hongkong. Champion. — Hook. and Arnott. Beechey Voyage: 217: Canton Vacchell.

7. PACHYSTOMA EDGEWORTHII:

Carinis inter lobes laterales quinis. Apaturia Edgeworthii Falc. Mss. herb. Lindl. Racemus densiflorus. Bracteae ovarium pedicellatum non aequantes. Sepala lanceolata. Tepala lineari ligulata. Labellum trifidum. Laciniae laterales triangulae. Lacinia media oblonga retusa cum apiculo. Columna valde clavata. Flores albi, illis praecedentis paulo majores. Labelli striae purpureae, discus viridis.

bb. Labelli lobus medius obtusus retususve.

8. PACHYSTOMA PUBESCENS Bl. l. c. Tab. XXIX. Rchb. fil l. c.:

Labelli lobo medio cuneato retuso emarginato.

Folium ensiforme tripedale nervosum angustum acutum. Pedunculus et inflorescentia exacte praecedentis. Perigonium subbrevius. Labellum flabellatum, antice trilobum, lobi laterales extus semirotundi, intus rectilinei, apice acuti. Papulae quinqueseriatae per labelli discum.

In Java insula.

9. PACHYSTOMA MONTANUM Rchb. fil. l. c.:

Labelli lobo medio ovato concavo ciliato.

Apaturia montana Lindl. O. 131.

Sepala semiunciam longa, lateralia duplo latiora. Tepala linearia univenia. Labelli lobi laterales acuti; lineae disci quinque cristatae undulatae.

Zeylona: in monte Nuera Ellia: Macrae.

10. PACHYSTOMA SENILE Rchb. fil. l. c.:

Labelli lobo medio ovato undulato.

Apatura senilis Lindl. O. 130.

Pedunculus pedalis. Bracteae lanceolatae. Sepala ovata oblonga obtusa 5 lineas longa. Tepala lineari oblonga trivenia. Labelli lobi laterales subfalcati, lineae tres

glandulosae quarum laterales majores elevatae ad apicem labelli secus marginem excurrunt. Sylhet Wallich Uligapus at Kalegung Hamilton.

c. Tepala ovata.

11. PACHYSTOMA FORTUNI. Huc: *Spathoglottis Fortuni* Lindl. B. Reg. XXI. 1845. 19

Foliis binis lanceolato-linearibus scapo pubescente brevioribus, racemo secundo pubescente, bracteis acuminatis ovario duplo brevioribus, sepalis ovatis obtusis, petalis oblongis subsessilibus latioribus, labelli laciniis lateralibus oblongis erectis, intermedia cuneata emarginata, ungue utrinque dente aucto, lamellis 3 basi villosis carnosis, subdentatis lateralibus truncatis intermedia ad apicem fere procurrente, columna oblonga apice denticulata, polliniis inaequalibus omnibus acutis. Perigonium flavum. Labelli lobi laterales intus et extus purpureo adspersi.

Rchb. fil. Bonpl. III. 250. Folia terna, quaterna, cuneata lanceolata acuminata nervosa plicata. Pedunculus teretiusculus laxe vaginatus superne racemosus, minute puberulus. Bracteae lanceae acuminatae pedicellis breviores seu aequales. Ovaria cum pedicellis duas pollicis tertias longa, velutina. Sepala oblonga obtuse acutiuscula extus velutina. Tepala latiora, firmiora, basi cuneata. Labellum tripartitum, partitiones laterales ligulatae obtusae antrorsum curvulae; partitio media linearis basi utrinque unidentata, apice dilatata rhombea medio exciso biloba; lamellae obtusangulae super unguem in nervos incrassatos baseos exeuntes. Gynostemium curvum clavatum utrinque anguste alatum. Hongkong. Seemann! Hance!

12. PACHYSTOMA JOSEPHI:

Labelli partitione antica lineari, apice anguste flabellata biloba (nunc cochleata), carinis rhombeis a basi usque versus apicem, limbo superiore non cucullatis, carina media abrupta.

Spathoglottis Fortunei Lindl. in plant. Hookerianis. — Haec facile distinguitur carinis lateralibus abbreviatis limbo superiori cucullatis, lacinia antica flabellata dilatata latissima.

13. PACHYSTOMA WIGHTII. Huc *Spathoglottis pubescens* LO. 120. B. Reg. XXXI. 1845. sub 19:

Foliis 2 linearilanceolatis basi angustatis, scapo pubescente longioribus, racemo secundo pubescente, bracteis minutis acutis, sepalis ovatis acutis, petalis oblongis obtusis, labelli laciniis lateralibus oblongis erectis, intermedia cuneata, emarginata, lamellis 3 basi villosis carnosis lateralibus truncatis intermedia parum elevata, cis apicem evanescente, columna oblonga apice denticulata (?), polliniis obtusis inaequalibus 4 cuneatis. Flores flavi.

Sylhet mountains, Promes and Tong mountain in Ava.

Huc: *Sp. pubescens* Wight. Ic. V. 1739:

Leaves binate linear, lanceolate, narrow at the base, striated, shorter than the erect scape, raceme secund, bracteate, bracts minute, acute; petals oblong, lip acute at their base, the lateral lobes oblong, erect, middle one with 3 keellike appendages, two tubercles at the bases cuneate, and a little larger; peduncles, sepals and ovary pubescent.

Khassya Hills. Griffith.

1396. PLOCOGLOTTIS *Bl.*

Bijdr. 380. Tab. 48.

1. PLOCOGLOTTIS FIMBRIATA Tijsm. Binnend. Naturk. Tijdsk. Need. Ind. V. 1853.

Foliis elliptico oblongis plicatis glabris 7—9 costatis, scapis erectis puberulis, phyllis perigonii externis oblongis falcatis reflexis subulatis

supremo oblongo acuto, internis linearilanceolatis, labello obovato obtuso apiculato elastice articulato marginibus reflexis; capsulis oblongis sulcatis puberulis.

Salak.

1397. SOPHRONITIS *Lindl.*

B. Reg. not. ad 1129.

Lindl. Paxt. III. p. 10. 471.:

Perianthium explanatum subaequale. Sepala et petala imbricata libera. Labellum integrum cucullatum, linguiforme, basi cum columna connatum, saepius crista simplici transversa in medio lamellisque 2 axialibus. Columna libera, apice utrinque alata, alis integris conniventibus super cristam labelli. Stigma concavum, rostello obtuso. Anthera terminalis, opercularis, 8 locularis, cardine crasso inarticulato. Poll. 8 antice et postice parallela, caudicula duplici, pulverea. Herbae epiphytae (Brasilienses) monophyllae pseudobulbosae, racemis axillaribus effusis paucifloris. Flores coccinei.

1. SOPHRONITIS COCCINEA Rchb. fil. Huc: *Cattleya coccinea* Lindl. B. Reg. XXII. 1836. 1919.

Foliis solitariis oblongis acutis, caulibus ovalibus teretibus longioribus, floribus solitariis, spatha nulla, sepalis lineari-oblongis obtusis rectis, petalis triplo latioribus, labello ovato basi cucullato indiviso apice plano sepalis breviore.

Brazil. Descourtilz in bibl. Deless. 10. Stems 2—3 inches high. Flowers bright scarlet, 3" across.

Lindl. Paxt. III. 10. Gl. n. 473. *Sophronitis grandiflora* Lindl.

Folio oblongo acuto pseudobulbo ovali tereti longiore, floribus solitariis, spatha nulla, sepalis lineari oblongis obtusis rectis, petalis triplo latioribus, labello ovato, basi cucullato indiviso apice plano petalis breviore.

Descourtilz found it upon the mountains that separate the province of Bananal from that of Ilha Grande. Gardner Rio 659. 5678. Lip yellow.

Lindl. Sert. 5 f. 2. *Soph. grandiflora.* Peduncle simple, cylindrical, twisted, bright green, having at its upper end 2 smaller opposite bracts, which form a bifurcation, from their axil springs a filiform violet ovary, terminated by a broad flatly expanded flower.

Flower with all other parts of a bright vermilion, red, or orange, the sepals narrow, ovate, the pet. much broader, forming lateral wings; all streaked with deep red longitudinal lines, and having a satiny violet crest externally. Lip something like the standard of a leguminous plant inverted, clear yellow, with a broad nasturtium colour border and diverging veins of the same colour, cucullate at the base, slightly 3 lobed, with the middle division ovate, obtuse and much shorter than the sepals, passing from yellow orange to the deepest cinnabar red, but in all of them the exterior of the flower is a dead cinnabar red, with no visible streaks or veins. Column short, triangular, having two lateral white dilatations or wings bordered by bright crimson. Anthere convex, greenish, divided internally into 4 membr. cells, which are thickest at their upper half, and cover eight clear-yellow pollen masses, of a triangul. form and arranged into two rows.

2. SOPHRONITIS MILITARIS. Huc: *Sophronitis grandiflora* „Lindl." B. M. 3709 (XII N. S.)

Pseudobulbis oblongo cylindraceis, junioribus spathaceis apice monophyllis, folio elliptico, petalis elliptico-rotundatis, sepalis oblongo-lanceolatis subduplo minoribus, labello (parvo) trilobo, lobis lateralibus incurvis, obtusis intermedio acuminato planiusculo.

S. grandiflora Lindl. Sert. Orchid. t. 5 f. 2.
Cattleya coccinea Lindl. B. Reg. 1919 in text.
Epidendre ponceau „Descoutilz's Drawings. pl. 10 p. 27."

Figured by Dr. L. from a drawing executed, as it would appear, in the native country of the species by Mr. Descourtilz and he has I think rightly followed the suggestion of making it a Sophronitis. The credit of introducing the plant alive to this country is due to Mr. Gardner, who found it in the Organ Mountains of Brazil, and sent it home in 37. The station given by Mr. Descourtilz is upon the high mountains that separate the district of Bananal from that of Ilha Grande.

3. SOPHRONITIS PTEROCARPA Lindl. Paxt. Fl. G. Gl. 475 p. 11. 1853:

Folio coriaceo subrotundo oblongo, racemis brevibus corymbosis, ovario hexaptero longe rostrato, labello ovato cristato. Fig. 239.

This very rare plant in gardens has rosy purple flowers.

Gardner: Organ Mountains 665. Martius: on rotting trees near Mainerde in prov. Minas Geraës.

4. SOPHRONITIS CERNUA Lindl. B. Reg. 1129. 1147. B. Mag. 3677.
Sophronitis cernua Lindl. Paxt. Fl. G. III. Gl. 472.
Sophronitis isopetala Hoffg. B. Ztg. 1834.
Sophronitis Homannseggii Rchb. fil. Linn. Litt. Ber. XVI. 236.
Sophronitis nutans Id. Ibid.

Folio ovato oblongo, racemo corymboso paucifloro, sepalis petalisque ovatis acutis, labello repando acuto, columnae alis brevibus obtusissimis, ovario sexcostato. Fig. 236. 8. 9. 10.

Brillant scarlet flowers with a yellow lip. Sepals and petals same size. There does not seem to be any essential difference in the plants now referred here.

Lindl. l. c. 656:

Mr. H. G. Reichenbach has pointed out to us the false name of *Sophronitis nutans* ascribed to him by an occidental transposition of type at Nr. 472. is really chargeable upon Hoffmansegg, and that the name of S. Hoffmannseggi, another false name, should be placed to his fathers account. — Cf. Rchb. fil. in v. Schldl. und v. Mohl B. Z. 1852. 639.

Rchb. fil. l. c. p. 837:

Ich kannte diese Pflanze früher nur in solchen kleinen Exemplaren, wie sie im Bot. Reg. und Bot. Mag. abgebildet wurde. Jetzt fällt mir eine grosse Pflanze in (Hofrath Keil's Garten) auf, welche, in allen Theilen 2—3mal grösser, sich durch mehr längliche Blätter auszeichnet. Die Blüthen sind erst roth (wie *Epidendrum cinnabarinum*), endlich werden sie lila. Einen specifischen Unterschied kann ich nicht entdecken. Ueppige Form in Folge guter Cultur? Gardner's wildgewachsene Exemplare sind viel kleiner.

5. SOPHRONITIS VIOLACEA Lindl. B. Reg. XXVI. 1840. Misc. 18.

Pseudobulbo ovali, folio solitario lineari, scapo terminali basi multibracteato, 1 floro longiore, labello obovato acuto nudo basi gibboso, columnae alis maximis carnosis obtusis falcatis.

Pretty little epiphyte with solitary violet flowers, for which I am indebted to Mrs. Cannon of Stratford Green. Febr.

Paxt. Fl. G. III. p. 1. Gl. 474. F. 238:

Common in Brazil on Organ Mountains.

Rchb. fil. in v. Schlechtend. Linnaea XXV. p. 245:

Rhizomate repente funiformi, pseudobulbis cylindraceis seu pyriformibus, basi 2 squamis vestitis, unifoliis, foliis linearibus acutis pergameneis (—8" 4''' long., 2''' latis), pedunculo in axilla folii, squamis 3 lanceolatis acutis vaginantibus tecto, unifloro (c. flore 1" 8'''), ovario subcylindraceo, post anthesin valde elongato, perigonii

phyllis externis lanceolatis acutis (—11''' long., 1,5''' lat.), lateralibus internis paulo brevioribus, angustioribus, labello nunc obtuse rhombeo, nunc lanceolato acuto, nunc obovato acuto basi calloso, callo triangulari postice bilobo, ante calcaris ostium, calcare cum ovario et sepalis inferis connato, gynostemii brachiis productis oblongis nunc apice retusis.

1397/1. PHYSINGA *Lindl.*

B. Reg. 1838. XXIV. Misc. 45.

Sepala membranacea, aequalia, basi connata. Petala minora, basi sepalis oblique adnata. Labellum carnosum, tuberculatum, indivisum, cum basi columnae connatum, sacco vesiciformi basi auctum. Columna carnosa, nana, biloba, basi ima antherifera. Pollinia 4, filis duobus geminatis pulvereis adnata. Stigma: area minuta, madida, bidentata, supra faucem vesicae.

1. PHYSINGA PROSTRATA Lindl. l. c.:

Caulis prostratus, brevis, anceps, dense et distiche foliosus. Folia crassissima, ovato-lanceolata, acuta, amplexicaulia, dilute purpurascentia striata. Scapus terminalis, filiformis, prostratus, ramosus, 8—9 pollices longus, vaginis angustis, fusco purpureis, acutis, carinatis, striatis arcte vestitus. Flores pauci, parvi, apice ramorum, herbacei, dilute purpureo suffusi. Calycis laciniae acuminatae, patentes. Petala anguste lanceolata, acutissima. Labellum albidum, obovatum, acutum, apice recurvum, basi auriculis carnosis inflexis auctum; linea media callosa tuberculisque duobus antice procurrentibus: vesica sphaeroidea, viridescens. Columna alba, auriculis imis labelli brevior, basi ipsa tantum labello adnata.

Orchid of no beauty, but one of the most curious, that I am acquainted with. It has much the habit of an Epidendrum and is not at all unlike orchidiflorum in its manner of growth, but it belongs to no genus hitherto described. The sepals are united at the base into a cup as in Masdevallia; the labellum has a little bladder like pouch at its base, in room of a spur; and the column, which is very small, is more like that of a Cypripedium, than any thing else. Mr. Loddiges obtained it from Demerara.

1397½. DRYMODA *Lindl.*

Lindl. Sert. Orchid. (1838) 8.

Perigonium valde inaequale et irregulare. Sepalum supremum erectum, liberum, lateralia postice cum pede longissimo columnae connata, subrhomboidea, acuminata, sessilia, supremo pluries majora. Petala nana, libera. Labellum cum pede columnae articulatum, trilobum, convexum, lobo medio deflexo. Columna nana, semiteres, auricula longa petaloidea utrinque porrecta, basi in pedem longissimum linearem canaliculatum elongata. Anthera terminalis opercularis cristata, bilocularis.

Pollinia 4, accumbentia, glandulae globosae, grumosae, separabili accrescentia. Herba minuta, epiphyta, pseudobulbosa, aphylla, scapis radicalibus vaginatis unifloris.

DRYMODA PICTA Lindl. l. c.:

The only knowledge I have is from a sketch made by Mr. Griffith from specimens discovered by him in Febr. 1835 at Mergui in the Burmese empire. It is so entirely different from any other O. with which I am acquainted that I am unable even to name a genus with which it may be compared. In the structure of the stigmatic gland in particular it is so peculiar that Mr. Griffith considers the plant situated on the confiny of Epidendreae et Vandeae.

C. whole plant: I presume, the plant has nothing, but little lenticular angular pseudobulbs, it will be seen, that the flower is inverted, that is the labellum uppermost.

C. 1. pink and white lat. sepals (in icone flavi et purpurei!) between which hangs down the deep red fleshy, hairy labellum.

C. 2. Large yellow stigmatical gland standing in front of the anther.

C. 4. 4 pollenmasses, together with the gland. This gland is opaque, clavate, rounded, always separating with the pollen masses, which, especially the inner, adhere to it very firmly; it is composed of soft grumous matter and is easily broken away.

C. 5. Profile of same parts.

C. 6. External view of an outer pollenmass.

C. 7. Interior view of the same. Sert. Orchid. 8. C. 1838.

1397/8. HEXADESMIA *A. Brogn.*

Ann. sc. nat. 1842. XVII. 44.

Sepala subconniventia, supremo oblongo-lanceolato, lateralibus triangularibus infra cum basi columnae in pseudocalcare unitis. Petala sepalis subaequalia oblonga. Labellum cum basi producta columnae articulatum, subintegrum, plicatum. Columna petalis brevior, semiteres, apice clavata, clinandrio auriculis lateralibus et dente postico uncinato marginato basi foveola nectarifera excavata. Anthera operculaeformis, denti marginis clnandrii affixà, carnosa, sexlocularis. Pollinia 6, aequalia, 4 posticis caudiculis longioribus replicatis, 2 anterioribus caudiculis brevissimis, tria ad utrumque lobum antherae pertinentia et inter se caudiculis unita, facillime glutine apicis caudicularum in fasciculo unico connexis.

Herba mexicana ab indefesso viatore Linden Musaeo Parisiensi allata, habitu Dendrobia quaedam asiatica et forma floris Apora praesertim referens, sed polliniorum structura cum Epidendreis quadrans eorumque numero ab aliis hujusce familiae generibus, excepta Hexameria RBr. e tribu Malaxidearum distincta.

1. HEXADESMIA FASCICULATA. 1842. Ad. Brogn. in Ann. des Sc. XVII. p. 45. B. Reg. XXIX. 1843. p. 16. Misc. 21:

Flowered in the garden of the horticultural society, where it has been saved out of a collection formed by Mr. Hartweg at Quezaltenango in Guatemala. It has small green flowers of no beauty, and the habit of Epidendrum clavatum.

B. Reg. XXVIII. 1842. Misc. 44. Caules e rhizomate nascentes, erecti, basi graciles squamis vestiti, superius incrassato-subspathulati bulbosi, pseudobulbis stipitatis compressis, elliptico-lanceolatis apice diphyllis. Folia oblonga, 5—6 pollicaria, pollicem lata, coriacea, plana, apice emarginata. Flores terminales 2—4 fasciculati subsessiles, e spatha communi brevi exeuntes, pedicellis ovariisque gracilibus incurvis, squamis obtectis. — Huc:

Hexadesmia Lindeniana. Rich. et Gal. tab. 23. Ann. sc. nat. 1845. Jan. p. 23:

Pseudobulbis stipitatis fusiformibus compressis, apice 1—2 phyllis; foliis oblongo-ellipticis obtusis; floribus fasciculatis: labello unguiculato, ovali, obtuso.

Mexico.

2. HEXADESMIA CRUCIGERA Lindl. B. Reg. XXX. 1844. Misc. 4: *Hexopia crucigera* Batem. Mss.

Caule fusiformi, foliis exacte linearibus, racemis flexuosis paucifloris, bracteis ovatis membranaceis, mento valde producto, labello obovato alte bilobo.

A smallflowered inconspicuous Epiphyte of no beauty, introduced from Guatemala to Mr. Bateman, with whom it flowered some years since, where it received the name of Hexopia. Its flowers are not half the size of H. fasciculata.

3. HEXADESMIA STENOTEPALA Rchb. fil. Bonpl. III. 221:

affinis H. crurigerae Bat. foliis paulo latioribus, nunc longissimis, racemis a bracteis paucis brevibus imbricantibus tectis brevissimis, tepalis linearibus medio paulo dilatatis, labello rhombeo retuso. — Flores minores, quam in H. crurigera.

Ad Tortuga. Am. cent. Oersted!

4. HEXADESMIA MICRANTHA Lindl. B. Reg. 1844. XXX. Misc. 5:

Racemo multifloro, bracteis linearibus acuminatis membranaceis, sepalis acuminatis, labelli trilobi laciniis lateralibus rotundatis, intermedia apiculata.

The flowers of this are very much smaller than even these of H. crucigera, and white with a very little green. It is from Guatemala and is the no. 389. Lodd.

Obs. Forsan huc pertinet:

Scaphyglottis? fasciculata Hook. Ic. IV. 1841. tab. 317.

Pseudobulbis fasciculatis lanceolatis sulcatis monophyllis, folio lineari retuso costato avenato, pedunculo solitario brevi unifloro ad basin folii bracteato, bracteis numerosis imbricatis, perianthio patente, sepalis ovatis concavis, petalis angustioribus oblongis, columna brevi, labello oblongo obsoletissime trilobo recurvo.

Hab. Demerara. C. S. Parker Esq.

Of the Genus of this plant I am extremely doubtful. It was received in a living state, but the anther had fallen away, and no pollenmasses were to be found.

Species exclusa ad Tetragamestum collocata:

Hexadesmia bicornis Lindl.

1397/4. HEXISEA *Lindl.*

Hook. B. Journ. I, p. 7. 8. „On Cumings Orchideae".

Perianthium clausum. Sepala et petala subaequalia, angusta; illorum lateralibus invicem discretis sed basi columnae adnatis. Labellum posticum, cum columna connatum, refractum, inappendiculatum, integerrimum, sepalis subconnatis. Columna erecta, basi nullo modo producta, apice biaurita. Anthera dorso convexa, carnosa 4-locularis, valvulis membranaceis longitudinaliter dehiscentibus. Pollinia 4, collateralia (00 00), materie parca granulosa stigmati annexa. Herba epiphyta caulibus teretibus ascendentibus, articulatis. Folia linearia, coriacea, apice emarginata. Racemi terminales, pauciflori, bracteis vaginis membranaceis ex squamis cartilagineis imbricatis erumpentes.

This genus is in some respects related to *Isochilus* and *Dinema*, from which however it differs entirely in the structure of its pollenmasses. Its nearest affinity is certainly with Coelogyne and particularly with the section Panisea, from which it is chiefly distinguished by its posterior labellum connate with the column, like that of an Epidendrum. I am uncertain if this genus is not the same as Elleanthus of Presl.

Huc: *Euothonaea* Rchb. fil. in v. Schlechdl. und Mohl B. Z. 1852 p. 772.

Nov. Gen. Alamanniae floris structura simile labelli insertione ac androclinio tridentato ac vegetatione a Diothonaea recedens. cf. Garten-orchid. IV.

1. HEXISEA BIDENTATA Lindl. on Cumings Orch. in Hook B. J. 1. p. 8.

Hab. in Panama et Columbia occid. Cuming. (hab. s. sp.) N. 1297.

Caules teretes, 6—8'' longi. Folia 8'' longa, 2½''' lata. Flores glaberrimi, Ornithidi coccinei fere magnitudine. S. et P. linearilanceolata, acuta. Labellum subconforme, sed apicem versus paulo dilatatum. Auriculae columnae bidentatae.

In this plant the petals are often deformed, so as to be either abbreviated, or truncated or falcate, or toothed. Their natural form is, no doubt, such as I have described.

2. HEXISEA IMBRICATA. Huc: *Diothonaea imbricata* Lindl. Sert. Orchidac. 40. n. 1.

Caulis articulati internodiis, fusiformibus sulcatis basi squamis imbricatis, foliis linearibus apice retusis aut emarginatis, denticulo interjecto, pedunculis terminalibus 2—3 floris pariter imbricatis, labello ovato acuminato sepalis petalisque conformi.

High mountain chain between the 65 and 66 merid. and the 40 parall. of lat. 6—7000 above the see between Cladonia rangiferina and reticulata common. D. differs from Isochilus only in having the lip united to the column by an intervening membrane, and it bears the same relation to that genus as is born to Epid. by Encycl. Either a dist. genus, or a mere form of Isochilus. The original species collected by Hall in the valley of Leon has a lip very different in form from the other divisions of the perianth and both have a streng double callosity at the base of the fore part of the lip; in the true species of Isochilus on countrary the lip has either one tubercle only at that part or none at all. Perigonium miniatum.

Lond. Journ. 1843. II. p. 671. Lindl. Sert. t. 40. n. 1. Mountains of the Roraima chain at the heigth of 5000—6000 feet. Schomburgk.

Euothonaea imbricata Rchb. fil. l. c.

3. HEXISEA OPPOSITIFOLIA. Huc: *Epidendrum oppositifolium* Rich. et Gal. Annales des sc. nat. 1845. Jan. p. 21:

Caule erecto, bulbiformi articulato; articulis inflatis diphyllis, foliis oppositis oblongo-lanceolatis obtusis; floribus miniatis 2—4. terminalibus. Aff. Diothonaeae imbricatae Lindl.

Mexico.

Olim haec notavi:

Caule erecto, articulato, articulis fusiformibus sulcatis, basi squamis (6—7) lanceolatis vestitis, diphyllis, foliis ligulatis cuneatis apice retusis emarginatis, floribus terminalibus 4 ex squamis exortis, sepalis lanceolatis acutis, tepalis minoribus, labello ligulato acuto, cum gynostemii alis basi cyatheiformi, margine inde involuto, dein patente, callo rotundo bicarinato ante foveam basilarem. Flores miniati. Oaxaca N. 5030. Galeotti. — Euothonaea oppositifolia Rchb. fil. l. c.

Obs. Me judice bene distinguuntur hae species. H. imbricata pollet labelli lamina excavata. H. bidentata et oppositifolia eandem planam gerunt. Prior habet callum transversum in carinas tres exeuntem et labelli auriculas bidentatas. Altera viget callo rotundo bicarinato et auriculis dolabriformibus.

Obs. Habeo iconem speciei insignis a Warscewiczio in itinere primo pictam. Flos triplo major labello obovato.

1397/₈. CERATOSTYLIS Bl.

(cf. 1485. Endl. — Bijdr. 304.)

1. CERATOSTYLIS TERES Rchb. fil. in Bonpl. II. p. 89:

aff. C. gracili Blume, perigonio extus pubescenti, tepalis acutis. Appendicula teres Gr. 359. CCCXXXIII. Caulis spithamaeus, cylindraceus,

laevis, basi squamis scariosis vestitus. Folia sesquipollicaria crasso teretia mucronata. Flores 4—1 congesti aspectu Fumarioideo a spatha communi bracteisque scariosis lanceolatis fulti. Ovarium cum sepalis extus pubescens. Mentum bene productum, sepala lanceolata acuta, tepala ovata acuminata „apice reflexa" (sed in icone recta). Labellum integerrimum apiculatum spathulatum obtusum apice valde carnosum (concavum?); gynostemii processus concavi oblongi.

Gewissermaassen die Pleurothallis unter den Epidendreae. Trotz grosser Verschiedenheiten scheinen die C. mit Drymoda verwandt.

1397/6. ANTHOGONIUM *Wall.*

(Endl. Lindl. O. 425. 1609/1.)

1. ANTHOGONIUM GRIFFITHII Rchb. fil. in Bonpl. II. 90:

Foliis linearilanceis acuminatis plicatis, pedunculo folia excedente, labello obscure quadrilobo unguiculato basi gynostemio adnato, basi per axin bicristato. Anthogonium Gr. CCCXLV.

Obs. Monet ill. Lindley nil nisi ipsissimum *A. gracile* Wall.

1397/7. CHYSIS *Lindl.*

B. Reg. XXIII (1837) 1937.

Sepala paulo connata, patula: lateralia pedi producto columnae adnata et calcar simulantia. Petala sepalis conformia. Labellum trilobum, patulum, venis basi callosis. Columna marginata, canaliculata, mutica. Anthera subrotunda, opercularis glabra. Pollinia 8, in laminam luteam semifusa, 4 exterioribus tenuibus quatuor interiora crassiora abscondentibus. Rostellum laminatum, convexum. Herbae epiphytae, occid., ab arboribus pendulae; caulibus Cyrtopodii depauperatis, foliis nervosis basi vaginantibus, racemis lateralibus multifloris.

1. CHYSIS AUREA Lindl. B. Reg. l. c.:

Caules penduli, subclavati, articulati, squamis fuscis, membranaceis vestiti. Folia ovato-lanceolata, basi vaginantia, nervosa, undulata. Racemi pedunculati, ex axilla folii inferioris erumpentes, penduli, multiflori. Sepala ovata, obtusa, subundulata, basi alba, caeterum crocea; lateralium margine anteriore infracto. Petala ovato-oblonga, obtusa, magnitudine et colore sepalis similia. Labellum concavum, venis sanguineis, trilobum; lobo medio oblongo, obtuso, crispo, apice subsaccato; venis 5 mediis tumidis, callosis, tribus lateralibus utrinque pubescentibus obovatis. Pollinia sunt hujusmodi: lamina adest tenuis, lutea, pulverulenta, bipartita, utrinque biloba, in clinandrium prona, marginibus suis incrassatis et incurvis (== polliniis basi in laminis duabus geminatim cohaerentibus). —Praeterea adsunt 4 alia minora et prioribus supertecta, quorum duo ab angulis posterioribus et duo ab anterioribus lamellae supradictae fissae oriuntur (== poll. 4 alia minora). Horum corporum vera indoles latet; sed verosimiliter pollinia 8 adsunt quorum 4 exteriora in laminam fissam margine bilobam deliquescunt.

Discov. by Henchman is the valley of Cumancoa in Venezuela. Mr. H. describes it as growing suspended by long fibrous roots from the lateral trunks of trees, so that its pseudobulbs which in their growing state are uncommonly brittle hang downwards and wave in the wind, which would otherwise be sufficient to break them. Clapton Nursery.

B. Mag. XI. N. S. 3617. — Rchb. fil. Bonpl. II. 22: Caracas. 5000'. April. In Caracas eine grosse Seltenheit, in Neu-Granada häufiger. Ich besitze sie auch aus Panama. Wagener.

var. *maculata* Hook: sepalorum petalorumque parte superiore aureofusco tincta, labelli medio purpureo maculato.

Hook. bot. mag. tab. 4576. (April 1851). Lem. Jard. Fl. II. tb. 121. Van Houtt. Fl. VII. 671.

2. CHYSIS BRACTESCENS Lindl. B. Reg. XXVI. 1840. Misc. 181:

Bracteis cucullatis venosis foliaceis ovario longioribus, sepalis petalisque ovatis obtusis, intermedio carnoso bilobo plicato lamellis 5 carnosis aequalibus, parallelis basi pubescentibus, columna latissima carnosa cymbiformi antice pubescente.

B. Reg. XXVI. 1840. sub Misc. 180:

The other (species) has white flowers with a deep yellow fleshy lip, which is divided into two lobes, each folded twice so as to give the whole the appearance of being four lobed.

B. Reg. XXVII. (1841). 23:

Caules fusiformes carnosi, palmares. Folia ovato-lanceolata, basi cucullata, imbricantia, undulata, acuminata, supplicata. Racemus lateralis, horizontalis, folio brevior, 4—5 florus. Bracteae magnae, foliaceae, reticulatae, obtusae, concavae, cucullatae, laxae, ovario longiores. Flores magni, cerei, candidi, coriacei. Sepala lateralia dorsali latiora, obtusa, margine incurva. Petala oblonga, erecta, obtusa, basi angustata.

Van Houtt. Fl. des Serres. VII. 675.

3. CHYSIS LAEVIS Lindl. B. Reg. 1840. XXVI. Misc. 180:

Bracteis brevibus ovatis pedicelli longitudine, sepalo dorsali lineari-oblongo, lateralibus acuminatis, petalis falcatis apice rotundatis supra columnam convergentibus, intermedio membranaceo crispo subrotundo emarginato, lamellis 5 carnosis glaberrimis parallelis, lateralibus minoribus, columna basi alte excavata.

Barker. Very large yellow flower, whose lip is spotted with dull brown, and more membranous than in the others; and it is remarkable for its column becoming hard and very tumid after fertilization has occurred, and eventually acquiring a green colour.

Batem. Orch. Mex. Guat. tab. 31.

Obs. Species me judice optimae. *Chysis Limminghei* Lind. Rchb. fil. ipsa luce deficiente, noctu, facillime nonnisi tactu a C. aurea distingui potest. Hujus labellum apice crispolobatum, illius apice planum.

1397/6. ELLEANTHUS *Presl*

Reliq. Haenk. 97.

Perianthium ringens pentasepalum, sepalis tribus exterioribus ovato-lanceolatis, duobus interioribus linearibus apice et in basi incrassatis brevioribus. Labellum paulo longius, lanceolatum. Gynostemium erectum, antice sulco exaratum. Anthera sessilis decidua, operculo horizontali curvato tecta, loculis approximatis. Pollinis massae quatuor? cereaceae.

Herbae parasiticae. Radices intricatae. Scapi foliosi simplices. Folia elevato-nervosa. Spica terminalis pauciflora disticha, rhachi flexuosa. Bracteae magnae, flores involucrantes et illis longiores. Ovarium subobliquum.

EVELYNA Pöpp. Endl. Nov. Gen. I. p. 82:

Sepala subaequalia, erecta, libera. Labellum obcordatum, subrotundum, circum columnam convolutum, disco nudum, sessile, liberum, basi saccata bicallosum. Columna semiteres, nuda, clavata, medio antice processu brevi aucta. Anthera bilocularis. Pollinis farinosi massae octonae, quaternatim collaterales, caudiculis totidem brevissimis operculo glandulae stigmatis triangulari, plano affixae.

Gen. *Octomeriae* RBr. proximum.

Genus dicatum memoriae, Johannis Evelyn, Angli (nati Woltoonii MDCXX, denati MDCCVI) peregrinationibus, quibus majorem Europae partem perlustravit nec non calami sui fertilitate celebris, de Botanice inprimis libro suo Sylva et Pomona (Londini 1664. edd. recentior. 1776, 1780, 1814) de re agraria commentariis (Terra optime Lond. 1675. ed. nov. 1778) optime meriti

Rchb. fil. in v. Mohl und v. Schlechtdhl. B. Z. 1852. 707:

Die zarten, meist leidlich grossen Blüthen treten massenhaft auf zwischen den grossen Deckblättern. Blüthenstände denen der Phrynia, Myrosmata u. dergl. ähnelnd. Dazu das wunderliche Schauspiel, dass schneeweisse Blüthen in gelb und lila übergehen — die leibhaftigen Chamaeleone unter den Orchideen. Der Verbreitungsbezirk dieser Pflanzen scheint ein sehr grosser. Herr Leibold brachte Spuren einer fruchttragenden Art von Zacuapan in Mexico — eine Verwandte der *E. capitata*. — v. Warscewicz nahm nebenbei zwei Arten — die eine beschreibe ich unten. Die andere ist sehr interessant. Sie steht nächst *E. ensata* in Bezug auf Blätter. Allein die Deckblätter sind breitlineal, spitz, anscheinend dünnhäutig. Die Blüthenaxe sehr dick; gewöhnlich herabgeschlagen. „Blüthen violett.“ Chiriqui. — Ich erhielt keine Blüthen, mache daher nur auf sie aufmerksam. — Ich kenne auch zwei aus Brasilien. — Eigenthümlichen Abänderungen ist die Säule unterworfen. Unter der Narbe tritt bei manchen Arten (besonders den *Cephalelynae* und *Chloidelyna*) ein Kinn, ein Fortsatz hervor, unter dem dann eine Höhle sich bildet. Dieser Fortsatz entwickelt sich ganz spät, er ist in fast reifen Knospen nur schwach angedeutet. Die leicht abfälligen Schwielen sind reiche Behälter einer überaus feinkörnigen Stärke deren jüngste Bläschen sich (wie ich es auch bei anderen, höchst ausgezeichneten Stärkearten sah) mit Jod bräunen. — Diese Buckel sind bei den Euevelynen sehr leicht abfällig, vielleicht sogar im Leben? Ich komme auf diesen Gedanken, weil ich bei jeder Art einen Apparat finde, um diese Buckel zu halten, sobald sie gross sind. Die Cephalelynen bilden durch das übergreifende Kinn eine Höhle, das Kinn hält und stützt jene Organe. Die Stachydelynen haben entweder eine Einschnürung, oder aber eine Querplatte, auch beides. Sobald die Körperchen zart sind (wie bei *Chloidelyna*) findet sich eben nur eine Andeutung, um dem einmal befolgten Plane treu zu bleiben. Das zarte, schmale Kinn dieser Pflanze könnte grosse Buckel nicht halten. Alle neuerlich untersuchten Buckel konnten mir über die Art des Grundgewebes keinen sicheren Aufschluss geben, daher ich vor der Hand verziehe, nichts zu sagen. Ich habe die Mehrzahl der mir vorliegenden Evelynen bei Bestimmung der Art des Hrn. v. W. mit untersucht und will das Resultat dieser Arbeit um so weniger zurückhalten, als man bisher noch keinen Versuch gemacht hat, diese ursprünglich auf 5 Arten begründete Gattung einzutheilen.

A. Calelyna: Rchb. fil. in v. Schldl. B. Z. 186, 708:

Lamina depressa in labelli basi.

1. ELLEANTHUS MYROSMATIS. *Evelyna Myrosmatis* Rchb. fil. in v. Schldl. B. Z. 1852. 708:

Valida, caule calamum aquilinum crasso, vaginis verrucosis arpophyllaceis, foliis oblongis acuminatis cuneatis, medio sat latis, pergameneis, spathis 2 triangulo naviculaтibus, scariosis, sub spica compacta, bracteis oblongo lanceolatis acutis scariosis, ovariis parce muriculatis, perigonii phyllis externis oblongis acutis extus parce muriculatis, late-

ralibus internis linearibus acutis(?), labello oblongo lanceolato acuto, apice hinc inde verrucoso (? — anthera adhuc clausa, nolite putare pollinia pro verrucis habita!), apicem versus hinc inde denticulato, lamina baseos depressa, antice acuta, gynostemio utrinque angulato alato, processu rostellari ac androclinii limbo retusis.

Evelyna aurea Pöpp. Pöppig in scheda herb. mei nec. Pöpp. et Endl. Nov. Gen. et Spec.

Mein Exemplar ist hier und da etwas faulig, daher ich einige Fragezeichen an Stellen beifügte, wo eine Controle meiner Angaben mir lieb wäre. — Cuchero. Pöpp.

2. ELLEANTHUS ROBUSTUS. *Evelyna robusta* Rchb. fil. in v. Schldl. B. Z. 1852. p. 708:

Caule erecto, simplici, calamum aquilinum crasso, foliis latissimis, oblongis acutis, basi cuneatis, maximis in genere, ipsa E. Ruizii folia superantibus, spica compacta, cylindracea, a spathis 2—3 magnis fulta, spatha infima apice foliacea, superioribus bracteaeformibus, oblongis, acutis, scariosis, bracteis oblongis, acutis, scariosis, flores subaequantibus, ovaribus laevibus, perigonii phyllis externis ligulatis acutis, summo basi cuneato, lateralibus externis curvulis, phyllis lateralibus internis linearibus, apice dilatatis, acutis, labello flabellato, apice rotundato, denticulato, callo baseos depresso, antice subtiliter 4-dentato, retuso, gynostemio gracillimo, processu rostellari bidentato, androclinii limbo retuso, lateribus utrinque unidentato.

Cuchero in Peru. *E. strobilacea* Pöpp. Mss. — aber nicht die *E. strobilifera* Pöpp. Endl. — Wiener Museum und eigene Sammlung.

3. ELLEANTHUS WAGENERI. *Evelyna Wageneri* Rchb. fil. Bonpl. II. 21:

Valida, vaginis nervosis laevibus, foliis oblongolanceolatis basi vix cuneatis, apice longe attenuatis, summo folio florali lineari, spathis sub spica nonnullis oblongotriangulis apicem versus medio carinatis, inflorescentia cylindracea densissima, bracteis scarioso membranaceis oblongis acutatis flores tertio seu dimidio excedentibus, ovariis laevibus, sepalis triangulis acutis, tepalis linearibus acutis, labello obovato minutissime hinc illinc denticulato, ante basin subconstricto, callo basilari cordiformi simplici a basi ad medium sulcato, apice in acumen excurrente, gynostemio utrinque angulato, processu rostellari trilobo, lobis lateralibus acutangulis, medio lobo producto retuso, mentulo retuso appresso. Caracas. Wagener.

4. ELLEANTHUS CONIFER. *Evelyna conifera* Rchb. fil. Wzwz. Bpl. II. 113:

aff. E. Wageneri foliis dimidio angustioribus valde pergameneis, spica compacta conica, bracteis appressis oblongis obtusatis apiculatis, labello pandurato, acutiusculo, antice crenulato. — Specimen unicum prostat: caulis exacte spithamaeus sexfolius. Vaginae firmae nervis obscuris. Laminae a cuneata basi oblongae acuminatae nervosae, infima 8" longa, medio 1,5" lata, spathae 2 amplae naviculari cucullatae 1,5" longae. Spica polyantha congesta, bracteae oblongae obtusatae apiculatae nervosostriatae flores aequantes. Ovarium hinc illinc minutissime asperulum. Sepalum summum lanceolatum acutum, lateralia oblonga acuta, tepala linearia acuta. Labellum a ligulata basi obtuse rhombeum, antice minute crenulatum; callo baseos depresso obtuse triangulo. Androclinium trilobum, stigmatis fovea oblonga transversa, mentulum mediocre. Peru. v. Warscewicz.

B. *Euevelyna* Rchb. fil. in v. Schldhl. B. Z. 709: Callo didymo in labelli basi.

1. *Cephalelyna* Rchb. fil. in v. Schldhl. B. Z. 1852. 709: Inflorescentia capitata. Mentum sub fovea stigmatica valde productum. Simplices.

5. ELLEANTHUS CAPITATUS. *Evelyna capitata* Pöpp. Endl. N. Gen. et Sp. I, tb. 56 p. 32:

E. capitulo terminali depresso hemisphaerico: foliis oblongis acuminatis.

Herba perennis, parasitica, radicibus simplicibus (caeterum haud notis) cortici ramorum horizontalium affixa, in truncis verticalibus haud obvia, multicaulis, erecta. Caules erecti, simplicissimi, obtuse quadranguli, compressi, facie latiore canaliculati, glabri, per totam longitudinem vaginati ac foliosi, capitulo florum solitario terminati, pedes duos, interdum tres pedes alti, penna corvina crassiores. Vaginae cylindricae apice paullulum tumidae, nervoso striatae, sulcatae, glabrae, chartaceae, rigidae, folio terminatae, bipollicares. Folia alterna, illa Phari referentia, oblonga, longe acuminata, acutissima, basi acuta, integerrima, plana, utrinque glabra, nervis percursa primariis septem ad novem, subtus prominentibus ac pallidis, secundariis parallelis, tenuioribus, sex circiter pollices longa, saturate viridia. Capitulum caulem terminans depresso hemisphaericum, suffultum vaginis terminalibus utplurimum ventricosis, ultra apicem constrictum interdum in folium parvum, caeterum caulino simile transeuntibus, pollicem sesquialterum altum, bracteatum. Bracteae arcte imbricatae, acuminatae, mucronatae, glabrae, margine membranaceae, foliaceae, virides, inaequales, exteriores vel inferiores late ovatae vel subrotundae, vacuae, interiores sensim angustatae, unaquaevis florem unicum fovens, cum ovarii cylindrici basi infima connata, ante anthesin circum florem convoluta. Flores erecti, mediocres, purpurei, haud versicolores. Sepala erecta, libera vel vix extima basi leviter cohaerentia, anguste lanceolata, acuta, membranacea, nervosa, subaeqalia: posticum reliquis paullo longius: infima latere subobliqua: interiora angustiora, obtusata. Labellum nec cum sepalis nec cum columna connatum, ante columnae basin insertum, sessile, erectum, magnum, sepala longitudine excedens, circum columnam ventricoso convolutum, attamen postice ubi limbi margines sese invicem tangunt per totam longitudinem fissum, basi anteriore globoso saccatum, et glanduligerum, margine erecto nec reflexo tenuiter laciniulatum et ciliatum, disco nudum, nervosum, lamina vi explanata, obovata, medio emarginata, sepalis exterioribus fere sexies latiore. Glandulae labelli basi saccatae intus adnatae, cum eadem secedentes, globosae, magnae, albae carnosae. Columna inclusa, paullo curvata, semiteres, basin versus attenuata, apice clavato nuda, medio antice processu parvo, supra glandulas labelli fornicato, horizontali aucta, stigmate triangulari ner marginato nec glutinoso, glabro. Anthera denticulo terminali columnae adfixa, opercularis, decidua, bilocularis vel septis nonnullis vix in planta viva conspicuis in loculos incomplete partita margine undulata, crenulata, rostro brevissimo, obtuso apiculata. Pollinis massae in gemma cereaceae durae, sub anthesi farinaceae tandemque confluentes ac globosae basi acutiusculae, octonae, quaternatim fasciculatae, collaterales, circum glandulae stigmatis indistinctae operculum triangulare, planum, membranaceum, diaphanum semiradiatim dispositae, caudiculis octo brevissimis, sub lente aegre conspicuis operculi disco nec marginibus affixae. Capsula ignota.

Crescit supra ramos arborum validiorum in sylvis primaevis ad praedium Pampayaco. Floret Januario.

Lindl. Orch. Lind. p. 12, N. 66. 1836: „On the slope of Sierra Nevada in Merida at the height of 8000.'' Aug. Flw. white, glutinous (671.):

6. ELLEANTHUS BRASILIENSIS. *Evelyna brasiliensis* Lindl. Mss. Hook. Lond. Journ. II. p. 661. 1843;

Caule basi ad apicem foliato, foliis ovalibus acuminatis, capitulis basi foliosis subsessilibus.

Hab. On trees in dense forests by the sides of streams No. 642. Organ Mountains Gardner. (first coll.) This is possibly the Bletia capitata of Brown. Lindl.

7. ELLEANTHUS CASAPENSIS. *Evelyna casapensis* Rchb. in v. Schldl. B. Z. 1852. p. 709.

Gracilenta, vaginis asperis, arctis, foliis oblongis cuneatis, apice ...., subcoriaceis, folii floralis vagina ventricosa, lamina oblonga apice acu-

tiuscula, attenuata, bracteis ovatis, acuto acuminatis, latis, flores aequantibus seu superantibus, subscariosis, ob papillas muriculatas furfuraceis, perigonii phyllis externis oblongis, acutis, lateralibus internis ligulatis, acutis, sub apice dilatatis, labello late ovali, retuso, lateribus apicem versus fimbriato, ventricoso, non contracto, callis rotundatis sat magnis, androclini limbo retuso utroque latere minute unidentato, processu rostellari exacte triangulari, mento breviori. Casapi Matthews 1891.

8. ELLEANTHUS CEPHALOPHORUS. *Evelyna cephalophora* Rchb. fil. in Schldl. B. Z. 1852. p. 709:

E. capitata duplo gracilior, vaginis asperulis, foliis oblongis subcuneatis, acuminatis, subpergameneis, folii floralis vagina arctiori, lamina foliacea, bracteis ab ovata basi triangulis, acuto-acuminatis, flores aequantibus, ovariis laevibus, perigonii phyllis externis oblongis acutis, lateralibus internis ligulatis acutis, labello obovato (vix constricto), integro, callis baseos erectis carinaeformibus, obtusangulis, androclinii limbo membranaceo, ciliatulo, postice profunde emarginato, processu rostellari trilobo, lobo medio

Ausserordentlich ähnlich jener Pflanze, die ich für die mit 12 Worten beschriebene *E. brasiliensis* Lindl. halte. (Neu Freiburg. Beyrich. herb. v. Röm.). Diese hat nach meinen Skizzen genau dieselbe Tracht, fast dieselben Deckblätter und Blätter, aber die Lippe ist vorn schwach vierlappig, das Kinn dünner, dazu der Narbenfortsatz zweizähnig, der Saum des Androclinium niedriger, dreilappig, seitliche Lappen spitzzähnig, alle unversehrt. Cuchero in Peru. *Evelyna capitata* Pöppig; nicht *E. capitata* Pöpp. Endl. (Wiener Museum. Eigene Sammlung.)

9. ELLEANTHUS CYNAROCEPHALUS. *Evelyna cynarocephala* Rchb. fil. in Bonpl. IV. 216.

2. *Stachydelyna*. Rchb. fil. in v. Schldl. B. Z. 1852. p. 709: Inflorescentia spicata. Mentum parvum seu nullum. Simplices seu ramosae.

a. *Chloidelyna* Rchb. fil. l. c.: Mentum tenue, sed bene productum. (Icon. orig. falsa). Folia linearia.

10. ELLEANTHUS LINIFOLIUS Presl. Rel. Hänk. p. 97:

E. foliis linearibus carinatis nervoso-striatis, apice tridentatis, spica horizontali.

Radices filiformes semilineam crassae, flexuosae, intricatae. Scapi semipedales, erecti, ancipites, glabri, a basi usque ad apicem foliosi. Folia sesquipollicem longa, 1 lineam lata, linearia, carinata, striato-nervosa, apice tridentata. Spica terminalis, pollicaris breviorque, erecta aut erectiuscula, ovata, compressa, disticha. Rhachis angulis acutis flexuosa, glabra. Flores alterni. Bracteae 5 lineas longae ovatae acuminatae membranaceae albidae glabrae, flores involventes et illis longiores. Perianthium flavescens, sesquilineam longum. Ovarium fuscum glabrum.

Hab. in montanis Peruviae ad Huanocco. ♃.

Huc: *Evelyna graminifolia* Pöpp. Endl. Nov. Gen. et Spec. tb. 58 p. 33:

E. spicis compressis distichis; foliis linearibus angustissimis.

Herba perennis, Tillandsiarum nonnullarum habitu, pedalis vel paullo altior, multicaulis. Radices numerosae, parasiticae ramorum cortici affixae et in caespites quandoque permagnos contextae, simplicissimae, teretes, subglabrae, extus fungosae cortice delapso tenacissimae, albae, palmares aut parum breviores. Caules numerosissimi, erecti, simplicissimi, teretes, fili emporetici crassitie, vaginati, a basi inde foliosi. Vaginae cylindricae, arcte adpressae, truncatae, subcrenatae, altero latere brevissime fissae, elevato striatae, sulcatae, glabrae, emarcidae persistentes, pollice parum breviores, superiores sensim longiores. Folia cum vaginis basi articulata,

inde semiamplexicaulia, alterna, erecta, angustissime linearia, acuta, plana, nervosa, glabra, pollicem unum ad quatuor longa, linea unica raro latiora, obscure viridia. Spica terminalis solitaria folio extremo saepius brevior et inde primo visu quasi lateralis, caulis apici brevius articulato, interdum laxo insidens, bracteis foliaceis suffulta, ovata vel oblonga, compresso plana, disticha, pollicaris, rhachide flexuosa. Flores solitarii angulo externo rhachidis insidentes, parvi, glabri, albi, ovario oblique impositi, bractea inclusi ipsis fere longiore, ovato oblonga, apice attenuata, acuta, compresso ancipite, striata, glabra, rigida, straminea. Ovarium cylindricum subclavatum, setulis brevibus, nigris, rigidis hirsutum. Sepala labello adpressa, erecta, eoque breviora, libera, inaequalia: supremum reliquis brevius ac lateralia, inferiora angustiora acuta, glabra: infima labello supposita, lanceolato oblonga, obliqua, basi latiore circum labelli basin conniventia, margine interiore setuloso ciliata. Labellum more congenerum circum columnam in tubum ventricosum convolutum, limbo ciliatum, lamina dum vi explicatur aequilatera, utrinque obtusata, apice et lateribus emarginata, glabra, basi saccata glandulas vel callos duos adnatos ferens. Columna inclusa, semiteres, clavata, antice plana processus transversi nec minimum exhibens vestigium, ad marginem foveae terminalis anteriorem dente brevi armata. Anthera galeaeformis, opercularis, bilocularis. Pollinis massae congenerum.

Crescit in Peruviae sylvis supra arbores altiores ad Pampayaco. Floret Decembre, Januario.

Rchb. fil. Bonpl. II. 21. Caracas. 4000', nicht fern von der Stadt. Wagener.

b. *Eustachydelyna* Rchb. fil. in v. Schldl. B. Z. 1852. 709: Mentum nullum seu subnullum. Folia lanceolata seu oblonga.

aa. Kermesinae Rchb. fil. l. c.

11. ELLEANTHUS LINDENII, *Evelyna Lindenii* Rchb. fil. l. c.:

Caule valido robusto vaginato, bipedali, foliis summis oblongis acuminato-acutis, imo apice retusis, bilobulis, apiculo interjecto (Pleurothallidis more), ima basi rotundatis, vaginas asperulas (arpophyllaceas) superantibus, ramulis in axillis squamarum vetustarum mediarum abbreviatis, apice spicatis, bracteis ovatis acuminatis navicularibus scariosis, ovaria glabra superantibus, perigonii phyllis externis oblongis acutis, lateralibus apice extus carinatis, ima basi excavatis, pro recipiendo labelli sacculo basilari, internis ligulatis, acutiusculis, labello magno orbiculari nunc subtrilobo, integerrimo, seu hinc ciliatulo, ante basin constricto ope laminae humilis erectae retusae, corniculis baseos spiranthidinis, gynostemio validissimo. Caracas Linden. 139. (Erste Sammlung).

var. CYMBIBRACTEUS. *Evelyna Lindenii*. var. cymbibractea: Lind. et Rchb. fil. Bonpl. II. 282:

Recedit a genuina planta foliis angustioribus, bracteis ventricosis abbreviatis.

Cum tamen spica terminalis evoluta non adsit, errorem timentes speciem propriam stabilire noluimus. — Adest caulis ultrapedalis, inflorescentia terminali deflorata. Fasciculi ramorum brevium 4—5 ex axillis vaginarum, quarum laminae dejectae. Folia rigida, oblongolancea 1,5"—2" longa, basi paulo latiora, apice retusiusculo tridentatula. Spathae 0. Racemi pauciflori nunc flexuosi! Bracteae ovatae apiculatae scariosae nervosae ovariis paulisper muriculatis aequales. Perigonii sepala ovato-lancea, nervo medio extus carinata. Tepala ligulata subfalcata, apice obtuso nunc lobulata. Labellum flabellatum apice denticulato retuso semiovatum, plica per medium. Calli 2 oblongi angusti apice convergentes inter se, remoti in basi. Gynostemium utrinque antice obtusangulum; rostellum trilobum, lobi laterales semiovati, dente in medio. Mentulum nullum. — Aspasica in Ocanna. Blüthen gelb. Nr. 5000. Schlim.

12. ELLEANTHUS PURPUREUS. *Evelyna purpurea* Rchb. fil. in v. Schldl. B. Z. 1852. 710.

Caule valido, hinc ramoso, vaginis arpophyllaceis, foliis late oblongis, basi cuneatis, apice attenuatis, acuminatis, imo apice tridentatis, subpergameneis, folii floralis vagina arctiuscula, lamina ligulata, nunc superaddita spatha bracteaeformi, pedunculo flexuoso, papillis parvis flavis hinc inde muriculato, bracteis ovatis, acutis, navicularibus, scariosis ovaria aequantibus, papillis flavidis hinc inde parce muriculatis, oblongo-lanceolatis acutis, lateralibus internis ligulatis acutis, labello lato pandurato, antice denticulato, emarginato, cristula mediana parva, callis circularibus in basi gynostemii utrinque medio angulati, androclinii limbo postice emarginato, anticis angulis obtusangulo.

Nächst *E. kermesina* Lindl. Durch breite Blätter, gelbe Papillen und die Lippe unterschieden. — Unter Hrn. Bonpland's unbeschriebenen Pflanzen. (Berliner Museum.)

13. ELLEANTHUS CORIIFOLIUS. *Evelyna coriifolia* Rchb. fil. in v. Schldl. B. Z. 1852. 710:

Gracilenta, humilis, paucifolia, subramosa, vaginis asperulis, foliis lanceolatis, basi et apice attenuatis, marginibus membranaceis valde crispulis, ceterum pergameneis, folio florali lanceolato, carinato, margine crispulo, spica pauciflora, grandiflora, bracteis oblongo-lanceolatis, scariose herbaceis, flores excedentibus, ovariis papillis filiformibus paucis validissimis papulosis, perigonii phyllis oblongis acutis vernixiis, lateralibus internis spatulatis, labello pandurato basin versus excavato, apice acuto, antrorsum ciliato, callis ante basin (nec in basi!!!); gynostemio gracili, rostello tridentato, androclinii limbo retuso.

Neu Granada, Linden. 1272.

14. ELLEANTHUS KERMESINUS. *Evelyna kermesina* Lindl. Orchid. Linden 1846. N. 61. p. 11:

Ramosus, vaginis sublaevibus, foliis linearilanceolatis, subtrinerviis mucronatis, margine scabris, racemis flexuosis, bracteis navicularibus, labello crenato subpubescente, callis 2 parvis ovalibus in fundo et lamina transversa.

„An epiphyte from the forests of Tolima in the prov. of Mariquita, at the height of 9000′. Jan. Flowers bright carmine.“ (N. 1276.) The petals are obovate and emarginate, the leaves very narrow and hard; sheaths nearly smooth. Flowers quite distinct from each other, on account of the bends of the rhachis.

Rchb. fil. Bonpl. II. 21. Caracas. Wagner.

var. AURANTIACUS SIMPLEX. *Evelyna kermesina* Lindl., var. aurantiaca simplex Rchb. fil. Bonpl. II. 282:

Caulibus tenuibus simplicibus, reliquis tamen Evelynae kermesinae, bracteis tamen solito brevioribus et floribus aurantiacis.

Radices bene pilosae. Caules fasciculati graciles spithamaei calamum Sylviae crassi. Vaginae arctae punctulis elevatis asperae. Folia oblongoligulata acuminata apice retusiuscula pergamenea superne nitida 2—3 pollices longa, supra basin duas tertias pollicis lata. Racemus flexuosus, laxe conicus, sesquipollicaris. Bracteae ovatae scariosae, cucullatae, medianae ovaria aequantes. Ovaria laevia. Sepala triangulo acuta. Tepala linearicuneata obtusiuscula. Labellum pagina externa apice et basi saccatum, antice denticulatum, medio ab inferiori latere intruso constrictum; portio antica ubi vi expansa nunc trilobula. Calli 2 parvi oblongi in pariete postico sacci postici rotundi descendentes. Gynostemium medio utrinque angulatum. Rostellum cordatum apiculo interjecto, apposito utrinque anguli supremi apiculo. „Flores aurantiaci.“ Ocanna. September. 5000′. Nr. 99. Schlim.

15. ELLEANTHUS ARPOPHYLLOSTACHYS. *Evelyna arpophyllostachys* Rchb. fil. Bpl. II. 21:

Caule validiori, vaginis acutis nervosis punctulatis, foliis oblongo-lanceolatis longe attenuatis, spathis 3—4 ovatis acutis, racemo oblongo-cylindraceo $2^1/_2$ pollicari, bracteis scariosis rigidis margine tenuioribus oblongis acutis flores aequantibus, ovariis laevibus, sepalis oblongis acutis, tepalis linearibus acutis, labello circulari basi cuneato, margine plicato crispo, callis 2 rotundis approximatis, gynostemio exangulato, mentulo appresso retuso, processu rostellari obtuso bilobo denticulo interjecto. Caracas. Wagener.

16. ELLEANTHUS AMETHYSTINUS. *Evelyna amethystina* Rchb. fil. Wrwz. Bpl. II. 113:

aff. E. arpophyllostachydi rigidior, brevifolia, bracteis acuminatis, labello basi angusto subito reniformi, callis semilunatis obtusis maximis, gynostemio utrinque angulato, mentulo nullo, ovario densissime muriculato. Caulis rigidus, quasi ferreus. Vaginae nervosae vernixiae. Folia lanceolata acuta margine microscopice crispula prope coriacea (chartacea in arpophyllostachyde), acuta seu mucronata, superiora (quae tantum adsunt) 2" longa, $^1/_2$" lata medio. Spatha infima foliacea, 2 superiores scariosae bracteaeformes. Pedunculus nutans paulisper flexuosus densissime muriculatus. Bracteae oblongae acuminatae scariosae flores aequantes. Ovaria muriculata. Perigonium pulcherrime amethystinum, majus illo E. kermesinae. Sepalum impar oblongum apiculatum, sepala lateralia subaequalia; tepala ligulata acuta; labellum basi late ligulatum utrinque extrorsum curvatum ante medium (a basi) subito hastato dilatatum, semiovatum, crenulatum; calli baseos reniformes maximi; gynostemium gracile, utrinque angulatum, medio antice carinatum; mentulum nullum; rostellum bidentatum; fovea ovata. Peru. v. Warscwcz.

17. ELLEANTHUS LANCIFOLIUS Presl. Haenk. p. 97:

E. foliis lanceolatis acuminatis plicato-nervosis serrulatis, apice tridentatis, spica horizontali.

Radices praecedentis, longiores tamen et crassiores ac minus intricatae. Scapus pedalis, anceps, inferne vaginatus, superne triphyllus. Folia erecto-patentia, firma, 4 pollices longa, vix 5 lineas lata, lanceolata, in acumen attenuata, apice tridentata, dente medio longiore, plicato-nervosa, margine serrulata. Vaginae tuberculato-scabrae. Spica terminalis horizontaliter reflexa, compressa, disticha, ovata, rhachi angulata et angulis acutis flexuosa. Bracteae ovato-lanceolatae, longe acuminatae membranaceae, flores plus quam duplo superantes, infima fere sesquipollicaris, superiores decrescentes. Perianthium flavescens.

Hab. in Guayaquil. ♃.

18. ELLEANTHUS FLAVESCENS. *Evelyna flavescens* Lindl. Orch. Lind. N. 60. 1846. p. 11:

Ramulosa, vaginis scabriusculis, foliis lanceolatis 5—7 nerviis acuminatis obtusis, strobilis oblongis basi laxis, bracteis inferioribus apice herbaceis, labello integerrimo, emarginato, callis duobus parvis ovatis in fundo.

„Terrestrial between Humucarabeja and the Agua de Obispo, in the province of Truxillo, at the height of 7000'. May. Flw. yellowish." N. 625. Leaves smaller than in the last (bractescens) and bracts far narrower.

19. ELLEANTHUS BRACTESCENS. *Evelyna bractescens* Lindl. Orchid. Lind. 1846. N. 59. p. 10:

Ramulosa, vaginis subsetosis scabris, foliis lanceolatis subseptemnerviis acuminatis emarginatis, strobilis ovalibus, bractea infima apice

herbacea, labello fimbriato emarginato, callis duobus magnis ovatis in fundo et lamina transversa.

„On old stunded trees skirting the Paramos of the province of Merida at the height of 800—10000'! July. Flw. red." N. 2215.

Near E. aurantiaca.

bb. Furfuraceae Rchb. fil. l. c.

20. ELLEANTHUS HYMENOPHORUS. *Evelyna hymenophora* Rchb. in v. Schldl. B. Z. 1852. 711:

Caule simplici, vaginis (in sicco saltem) profunde sulcatis, foliorum laminis oblongis, acutis, membranaceo-pergameneis brevioribus, spatha pandurata, naviculari, hinc muriculata, spica recurva (in sicco!), abbreviata, bracteis oblongis acutis navicularibus, scariosis, hinc muriculatis flores aequantibus, ovariis gibberosis (!), muriculato papillosis, perigonii phyllo summo oblongo acuto, basi cuneato, lateralibus oblongis acutis, lateralibus internis ligulatis, obtusiusculis, nunc valde cuneatis, labello orbiculari, fimbriato, basin versus marginibus implicatis contracto, fovea clausa ope membranae semilunaris retrorsae post anthesin lacerae, callis baseos 2 triangulis.

Blätter wie bei E. oligantha, aber spitz, nicht zugespitzt. „Blüthen schwefelgelb." Chiriqui Cordilleren. 6—7000'. Decbr. v. Warszcewicz.

21. ELLEANTHUS FURFURACEUS. *Evelyna furfuracea* Lindl. Orch. Lind. p. 12. N. 65. 1846:

Simplicicaulis, tenuis, vaginis purpuraceis, foliis ovali lanceolatis acuminatissimis multinerviis, bractea infima foliacea supremis subrotundo ovatis acutis, labello oblongo rotundato crenato emarginato, lamellis 2 in fundo concavo et linea elevata transversa.

„An epiphyte. Forests of Merida, at the height of 5500'. June. Flw. scarlet. (N. 619.) Also from Agua de Obispo, at the height of 9000'. May. Flw. fleshy, bright red." (N. 627). A slender thin leaved species with from 4—7 flowers in a head. June. 6—7000'. Nr. 741. Schlim. Ocanna. Rchb. fil. Bpl. II. 282. Blüthen rosa.

Rchb. fil. Bpl. II. 21. 4000'. Juli. Caracas. Wagener.

Huc: *Evelyna oeconomica* Rchb. fil. Wrswcz. Bpl. II. 113:

aff. furfuraceae (similis casapensi) foliis oblongis acuminatis latioribus, brevioribus, spathis floriferis!, bracteis latissimis ellipticis apiculatis punctatis, tepalis a ligulata basi ovatis acutis serrulatis, rostello erecto trimucronato.

Planta gracilis, 1,5pedalis superne flexuosa, bene foliata (folio spathaceo infimo florigero incluso 8). Vaginae tenuissime nervosae, punctatae; laminae oblongae acuminatae, basi paulo cuneatae, 5 pollices longae, 1,2" latae; folium summum vagina cucullata spathaceum, florem ex ostio vaginae propullulans (hinc nomen)! Spica reliqua pauciflora, flexuosa, brevis. Bracteae bene scariosae, nervosae, punctulatae, ellipticae, longius, brevius apiculatae, flores aequantes s. superantes, infimae nunc subpollicares. Sepala oblonga acuta. Tepala a ligulata basi ovata serrulata. Labellum basi constrictum, dein rotundum, serrulatum, basi bicallosum, callis oblongis. Gynostemium mentulo nullo, angulis apicilaribus utrinque porrectis parvis, limbo androclinii postico tridenticulato, rostello erecto, trimucronato. Neu-Granada. v. Warscewicz.

22. ELLEANTHUS DISCOLOR. *Evelyna discolor* Rchb fil. Wrswcz. Bpl. II. 113:

aff. E. hymenophorae foliis discoloribus, spica erecta, bracteis angustioribus, sepalis lateralibus alte carinatis, carinis denticulatis (nec integris), labello latiori magis denticulato, rostello erecto triangulo acuto (nec retuso emarginato). — Caules bipedales, validi. Vaginae firmae quasi lignosae, sulcatae. Folia a cuneata basi oblonga, acuminata, 8 pollices

WALPERS.

ANNALES BOTANICES SYSTEMATICAE.

TOMI SEXTI

FASC. IV.

AUCTORE

DR. CAROLO MUELLER BEROL.

LIPSIAE.

SUMPTIBUS AMBROSII ABEL.

1863.

1 Thlr. 6 Ngr.

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longa, 3—4 lata, inferne pulcherrime violacea!! Spathae 2 cucullatae acutae nervosae breves (inferior vulgo pollicaris). Spica plurimiflora, primum strobilum mentiens (expl. Wczw.). Bracteae lanceotriangulae acutiusculae bene nervosae 2—3 lineas longae, 1,5''' latae. Ovaria bene muriculata. Sepalum summum oblongum acutum: sepala lateralia concava, apiculata, inaequalia, dorso medio alato carinata, carinis minutissime denticulatis. Labellum basi brevi cuneata utrinque implicatum ceterum ovale denticulatum: calli 2 magni sub plica transversa absconditi. Gynostemium breve: rostelli dens medius angustus corneus (siccus adhuc croceus!), androclinii dentes laterales parvi; mentulum nullum. — Herrliche Blattpflanze mit wunderschön violetter Unterseite der Blätter. Peru. Warscewicz.

23. ELLEANTHUS RUIZII Rchb. fil. in Linnaea. XXII. 842. — in Bpl. II, 113:
aff. discolori: labello sessili, tepalis apice dilatatis denticulatis, gynostemio gracili elongato sub stigmate tota planitie antica angulato.' Bipedalis et altior. Vaginae punctulatae sulcatae validae. Laminae cuneato oblongae acuminatae (— pedales medio 4 pollices latae). Spatha herbacea concava oblonga acuta solitaria subpollicaris. Spica elongata densissima. Pedunculus parce muriculatus. Bracteae scarioso coriaceae, nervosae; oblongo-lanceolatae (4—2'' longae). Ovaria (deflorata) cylindracea bracteis duplo — triplo longiora (adhuc) parce muriculata. Sepala ovata acuta, lateralia inaequalia, nervo medio carinata: tepala ligulata acuta apicem versus denticulata. Labellum sessile circulare denticulatum, callis ovatis in basi sub plica abscond itis!! Gynostemium gracile, androclinium rotundatum apiculatum, fovea oblonga transversa; regio infrastigmatica angulata producta. Diess nach besseren Exemplaren. Peru. Ruiz, Pavon.)

cc. *Oliganthae* Rchb. fil. l. c. 711.

24. ELLEANTHUS OLIGANTHUS. *Evelyna oligantha* Pöpp. Endl. I. t. 57. p. 33:

E. spica terminali simplici, elongata; floribus distantibus; bracteis subulatis; foliis oblongis, acuminatis.

Crescit in sylvis montosis Peruviae versus Pampayaco ad terram locis siccioribus. Floret Februario.

Caules terrestres, erecti, apice interdum paullo laxi, inferne teretes, superne subcompressi vel obtuse et inaequaliter angulati ibique inter angulos sulcati, per totam longitudinem vaginati atque foliosi, bipedales, penna anserina tenuiores. Vaginae cylindricae, paullo inflatae, profunde nervoso sulcatae, glabrae secundum fissuram dorsalem brevem margine membranaceo, scarioso, undulato cinctae, caeterum integerrimae, seniores in griseum vergentes, circiter sesquipollicares vel paullo longiores. Folia cum vagina articulata, alterna, oblonga, superiora angustiora, inferiora latiora quandoque subrotundo oblonga, superiora angustiora, omnia in acumen longum attenuata, plana, nervis primariis septem ad novem percursa. Spica terminalis leviter flexuosa, elongata, simplicissima, haud imbricata, rhachide tenui, obscure angulosa, bracteata, digitum longa. Flores aurantio purpurei, invicem remoti, alterni distichi, patentes, sub anthesi bracteas aequantes rectas, subulatas, acutissimas, supra concavas, nervosas, rigidissimas, pungentes, pallidas, unifloras. Ovarium curvatum, cylindricum, glabrum, ipso flore paullisper longius. Sepala labello breviora, inaequalia; exteriora oblongo lanceolata, apice parum latiore ac rotundato in mucronem setiformem excurrente: interiora angustiora, mutica; infima labello supposita cum reliquis erecta, membranacea, glabra, nervosa. Labellum subrotundo obovatum uti in congeneribus circum columnam convolutum, ventricosum, margine paullisper reflexo lacinulato dentatum, caeterum glabrum. Columna inclusa, semiteres, medio pro stigmate profunde excavata, processus supra labelli glandulas fornicati vix vestigia exhibens, nec basi pro iisdem recipiendis insignius cava. Antherae et pollinis fabrica uti in speciebus supra descriptis.

25. ELLEANTHUS GRACILIS. *Evelyna gracilis* Rchb. fil. Linnaea. XXII. 1843.

26. ELLEANTHUS MACULATUS. *Evelyna maculata* Lindl. Pl. Hartwg. p. 149. 1844. Dec.

Caule simplici, foliis lanceolatis, sulcatis, racemo laxo aperto, bracteis longissimis canaliculatis acuminatis furfuraceis. — E. oliganthae affinis.

In Cordillera prope Loxa.

27. ELLEANTHUS AURANTIACUS. *Evelyna aurantiaca* Lindl. p. Pl. Hartwg. 149. 1844. Dc. Nr. 843:

Caule ramosissimo, foliis lanceolatis acuminatis strictis, racemo laxo, bracteis ovatis acutis concavis pedicellis aequalibus. — Flores aurantiaci. E. oliganthae magnitudine.

In montibus Paccha.

dd. *Ensatae* Rchb. fil. l. c. 711.

— Occurrunt simplices ac ramosae. —

28. ELLEANTHUS RHODOLEPIS. *Evelyna rhodolepis* Rchb. fil. in v. Schldl. B. Z. 1852. 711:

Simplex(?), caule gracili, rigido, vaginis longis arpophyllaceis, foliis lineari-lanceolatis, acuminatis, rigido-coriaceis, nervosissimis, folii floralis vagina ampla, lamina lancea, spica nutante (semper?), rhachi densissime papillis muriculatis obsita, bracteis oblongis attenuatis acutiusculis, coriaceo-scariosis, parce papilliferis, flores excedentibus, roseis (in sicca adhuc!), ovariis densissime papillosis, perigonio externo extus parce papillifero, phyllo summo ovali acuto, lateralibus externis lanceolatis acutis excavatis, lateralibus internis ligulatis apice hinc denticulatis, lunatis (!), labello orbiculari, lateribus integris baseos involutis, apice fimbriato dentato, callis baseos maximis, gynostemio utrinque apicem versus angulato-alato, androclinii limbo retuso, integerrimo seu medio minute unidentato, processu rostellari transverse retuso, nunc medio dentato. Peru.

29. ELLEANTHUS HALLII. *Evelyna Hallii* Rchb. fil. in v. Schld. B. Z. 1852. 711:

Ramosa, vaginis arpophyllaceis, foliis lanceolatis acuminatis, apice retusiusculis, coriaceo-pergameneis, nervosis, folii floralis vagina excavata, apice foliacea, spica abbreviata, bracteis oblongis, acuto-acuminatis, concavis, laevibus, scariosis, flores superantibus, ovariis papillis muriculatis obtectis, perigonii phyllis externis lanceolatis argute acuto-acuminatis, lateralibus internis ligulatis, obtusis, labello phylla reliqua excedente, rhombeo, dimidio anteriori majori, ciliato-dentato, callis baseos compressis oblongis erectis.

Hat Aehnlichkeit mit der einfachstengliehen *E. ensata*, deren Deckblätter langgespitzt, mit Papillen bedeckt sind, anderer Momente nicht zu gedenken. Berge um Tunguragua. 1300—1600'. Hall.

30. ELLEANTHUS ENSATUS. *Evelyna ensata* Lindl. Orch. Lind. 1846. p. 12. Nr. 64:

Simplicicaulis, vaginis apice verrucosis, foliis linearilanceolatis rigidis acutis multinerviis, racemo oblongo multifloro, folio florali ventricoso, bracteis ovatis setaceo-acuminatis floribus longioribus, labello medio constricto apice rotundato apiculato, callis 2 angustis acuminatis in fundo concavo.

„Terrestrial Sierra Nevada, at the height of 8000'. Aug. Flowers in spikes bright carmine (Nr. 664.) Leaves 6" long and scarcely more than half an inch broad. Raceme $2^1/_2$ inches long, nodding.

Rchb. fil. Bpl. III. 69. Dunkelrosa Blumen. Drei und einen halben Fuss hoch. 5000'. Ocanna. Wagner.

ee. *Columnares* Rchb. fil. l. c. 711.

31. ELLEANTHUS BONPLANDI. *Evelyna Bonplandi* Rchb. fil. in v. Schld. B. Z. 1852. 711 :

Simplex, validissima, caule calamo aquilino crassiore, vaginis nervosis, celerum laevibus, foliis oblongo-lanceolatis acutiusculis valde nervosis, coriaceis, spica 5-pollicari, cylindracea, plurimiflora, densissima, spathis oblongis acutis excavatis scariosis, ochraceis, apice atropurpureis, flores excedentibus, ovariis glabris, perigonii phyllis externis triangulis acutis, lateralibus internis linearibus, acutis, labello obtuse rhombeo-orbiculari, antice minute crispulo, ante basin constricto, callis basilaribus minutis.

Von *E. strobilifera* Pöpp. Endl. durch Gestalt der Lippe und mehrere Spathae gut unterschieden. Dagegen hat *E. lupulina* Lindl. papillöse Fruchtknoten, schmälere Deckblätter, grosse Lippenbuckel u. s. w. Aus Hrn. Bonpland's Sammlung. (Berl. Museum.)

32. ELLEANTHUS LUPULINUS. *Evelyna lupulina* Lindl. Orchid. Lind. 1846. p. 11. N. 63 :

Simplicicaulis, vaginis brevibus scabridis, foliis multinerviis acutis, racemo oblongo obtuso multifloro, foliis floralibus basi ventricosis, bracteis linearilanceolatis apice dilatatis floribus duplo longioribus, labello medio constricto apice rotundato callo magno didymo in fundo concavo.

„A terrestrial plant from the vicinity of the Paramo of the Sierra Nevada at the height of 10,000'. Aug. Plant 4—5' high. Flowers rose coloured in spikes. (N. 642). Raceme very compacts, 4" long. Bracts very long and narrow.

33. ELLEANTHUS COLUMNARIS. *Evelyna columnaris* Lindl. Orch. Linden. 1846. p. 11 : N. 62 :

Simplicicaulis, vaginis laevibus, foliis lanceolatis, multinerviis acuminatis abrupte acutis, racemis oblongis elongatis compactis obtusis multifloris, bracteis membranaceis obtusis, labello apice ovato integerrimo basi bifoveato calloso.

„A large terrestrial species 3—4' high. Agua de Obispo and Sierra Nevada at the height of 9000', May to August. Flowers white and purple in spikes." (N. 620). Leaves one foot long, and nearly two inches broad. Racemes between 4 — 5 inches long, with the lowest bract leafy. Near *E. strobilifera.*

Rchb. fil. Bpl. II. 282 : foliis oblongis acuminatis nervosis, spathis sub spica scariosis 2, labello rhombeo acuto antice denticulato, callis in basi geminis, ditione inter et ante callos incrassata, gynostemio utrinque acutangulo, mentulo sub fovea. — Planta bipedalis. Caulis calamum aquilinum crassus. Folia evoluta quatuor. Vaginae subtiliter nervosulae. Laminae oblongae acuminatae nitidae, bene nervosae 6—7 pollices longae, supra basin 2,5 pollices latae. Folia subspathacea 2 parva sub inflorescentia conico-cylindracea, tri — quadripollicaria. Bracteae oblongae acutae flores aequantes. Ovaria laevia. Sepala triangulo ovata apiculata. Tepala linearia apice acutiusculo lobulata. Labellum cucullatum, flabellatum, antice ovatotriangulum serrulatum. Ditio antecallina incrassata. Calli 2 depresso pyriformes approximati. Gynostemium gracile utrinque pone foveam angulatum, mentulum minutum. — Blüthen rosa. — Pamplona: la Baja. 8000'. Januar. 1173. Schlim.

34. ELLEANTHUS STROBILIFER. *Evelyna strobilifera* Pöpp. Endl. Nov. Gen. et Sp. p. 32

E. spica terminali cylindrica, densa; bracteis ovalibus arcte imbricatis; labello denticulato, margine ciliato, foliis ovato oblongis acuminatis, planis. — Crescit in rupibus aridioribus dumeta formans una cum Sobraliis versus Cuchero, Cassapillo etc. Floret Januario.

Caules terrestres, stricti, simplicissimi, inferne teretiusculi, compressi, obtuse ancipites, superne tetragoni, sulcati, glabri, rigidi, vaginati, valde foliosi, quinque ad septem pedes alti, calami anserini crassitie, basi crassiores. Vaginae cylindricae vel compresso subteretes, apice ventricoso latiores, uno latere ad tertiam longitudinis suae partem fissae, ore obliquo truncatae et margine membranaceo, ex sicco, undulato terminatae, elevato striatae, sulcatae, glabrae, pollices duos longae. Folia cum margine vaginae transversim articulata, alterna, latissime ovalia, in acumen sensim producta, basi concava subsemiamplexicaulia, plana, integerrima, nervis percursa parallelis, primariis novem vel undecim utrinque prominentibus, subtus valde carinatis atque stramineis, secundariis numerosissimis, caeterum glabra, nitida, rigida, chartacea, obscure viridia, pollices septem ad octo longa, duos et dimidium lata. Spica in caulis extimo apice utplurimum bis vel ter geniculato sessilis, strobilum refert nec non Amomis nonnullis peruvianis simillima, erecta cylindrica, bracteata, vagina ultima caulis admodum ventricosa suffulta, digitum ad spithamam longa, pollicis diametro transversali. Bracteae arcte imbricatae, erectae, adpressae, acutae, membranaceae, purpurascenti virides, glabrae, inaequales, inferiores latiores ovato oblongae, convexae, superiores oblongae, dorso magis planae, unaquaevis florem fovens. Ovarium curvatum, cylindricum, vix apice paullo incrassatum, glabrum. Flores majores ac in specie praecedente, caeterum simillimi, bracteam longitudine haud excedentes, versicolores, primum nivei, deinde flavi, tandem purpurei in eadem spica occurrunt variis hisce coloribus secundum aetatem tincti. Sepala libera, erecta, lanceolata, acuta, labello breviora, subaequalia, interiora parumper angustiora. Labelli circum columnam in tubum infundibuliformen postice fissum convoluti lamina dum vi explicatur late obovato spathulata, leviter obcordata, denticulato ciliata. Glandulae duae magnae, albae, globosae, dorso basi saccatae labelli intus adnatae. Columnae erectae, inclusae apice nudae processus anticus intermedius multo minus prominens ac in *E. capitata*, unde fovea ab eodem fornicata, glandulis labelli recipiendis apta multo minor evadit. Antherae fabrica omni modo ut in specie priore.

35. **ELLEANTHUS AUREUS.** *Evelyna aurea* Pöpp. (Endl. l. c. tab. 57. p. 38:

E. spica terminali subovali, densa; bracteis oblongis, laxe imbricatis; labello denticulato, margine glabro; foliis distichis, oblongo lanceolatis, acuminatis, rigidissimis, plicatis. — Crescit in Peruviae montibus aridioribus herbidis et in rupibus calcareis versus praedium Cassapi. Floret sub finem mensis Februarii.

Herba terrestris, perennis, erecta, omnibus praeter flores partibus rigidissima, fragilis. Radices paucae, simplices. Caules compresso teretes, superne fere cylindrici, glabri, vaginati, basi ad medium usque foliis destituti, rigidi, sesquipedales. Vaginae cylindricae, dorso paullo carinatae, antice ad medium fissae, ore rotundatae, profunde sulcatae, glabrae, pollices unum et dimidium longae. Folia alterna disticha, erecto patentia, cum vagina articulata, oblongo lanceolata, acuminata, integerrima, complicata, plicato nervosa, inter nervos primarios septem vel octo subtus valde prominentes, profunde sulcata, rigidissima, viridia, exsucca, pollicibus quatuor rariter longiora, pollice paullo angustiora. Spica terminalis solitaria, circuitu anguste ovalis, bipollicaris, bracteis laxe imbricata apicem versus minoribus, infimis ex vaginis terminalibus ortis foliaceis, late ovalibus, superioribus oblongis, omnibus obtuse acutis, margine membranaceo, undulato cinctis, glabris, tenuiter striatis, rigidis, dorso parum convexis, intus florem solitarium foventibus, albis. Flores magnitudine et reliquis notis ut in *E. strobilifera*, excepto labello cujus margo lacinulis inaequalibus denticulatus intus haud villosus nec pube ciliata praeditus observatur ut in altera specie habitu simili; colore quoque diversi sepala dilute purpurea et labellum aureum, intus rubro croceum monstrant. Labelli basis minus saccata, glandulas congenerum fovet. Columna medio quidem admodum tumida ac basin versus excavata processu magno *E. capitatae* orbata observatur. Anthera et pollinis massae ab supra descriptis nullo modo recedunt.

36. ELLEANTHUS HAEMATOXANTHUS. *Evelyna haematoxantha* Rchb. fil. Bpl. II. 238: aff. E. aureae: foliis pergameneochartaceis nec subcoriaceis duplo latioribus, gynostemio utrinque sub apice acutangulo nec medio, plica per labellum, bracteis latioribus.

(Obs. *E. lupulina* Lindl. bracteas habet apice dilatas floribus duplo longiores.) — Caulis calamum aquilinum crassus, subbipedalis. Folia 4. Vaginae nervosae cicatricibus rotundis hinc illinc depressis. Folium quintum parvum vaginans. Racemus strobilinus conicus densus. Vaginae 2 scariosae ovatae acutae in basi. Bracteae oblongae acutae nervosae flores aequantes. Ovaria minutissime muriculata. Sepala triangula apiculata, lateralia extus carinata. Tepala linearia nunc subfalcata; apice obtusiuscula. Labellum late flabellatum, apice semiovato productum, fimbriato denticulatum, nunc trilobum. Plica transversa per discum. Calli gemini in basi. Gynostemium crassum labello paulo brevius; angulus acutangulus utrinque in latere; rostellum cordatum apiculo in medio interjecto; menulum gyrosum sub fovea. Blüthen roth mit gelber Lippe. Ocanna. Juli. 4000'. Nr. 25. Schlim.

Subordo III. VANDEAE. Lindl.

1398. b. AMBLOSTOMA Scheidw.

Otto und Dietrich Allg. Gartenz. 1838. 383.

Perianthium subconnivens. Sepala aequalia, basi connata, concava, apice inflexa. Petala angustiora, reflexa. Labellum cuneiforme, intus bicristatum, cum columna truncata in urceolum connatum; pars libera ascendens digitatotrifida. Anthera applanata late cordata, obtusa, quadrilocellaris; pollinia 4, sphaerice per paria cohaerentia.

AMBLOSTOMA TRIDACTYLUM Rchb. fil. Huc: *Epidendrum tridactylum* Lindl. in B. R. XXIV. Misc. 81:

Caule fusiformi gracili apice distiche folioso, foliis anguste oblongis apice paulo angustatis obtusis cum mucronulo, spica terminali tripartita multiflora foliis longiore, sepalis subrotundo-ovatis patentibus incurvis lateralibus majoribus, petalis spathulatis linearibus apice incurvis, labello ascendente tripartito basi bicalloso: laciniis linearibus carnosulis lateralibus margine involutis intermedia breviore plana, columna brevi crassa cuneata labello omnino adnata.

A curious Brazilian Orchid with smaller flowers, than any other species of the genus yet in the gardens. I am obliged for it to Stephen Cannon, Esq. of Stratford Green. The flowers are a pale brownish yellow, except the column, which is green, short, thick, and wedge shaped. Flowered in the stove in May, for the first time.

Lindl. Folia Epidendrum Nr. 290: Wild in Brazil, in dense tufts on large trees in the Organ Mountains. Gardner 626. The reputed country of this, viz. Mexico, is no doubt a Garden error.

Huc: *Amblostoma cernua* Scheidw. l. c.:

Caulis herbaceus, erectus, simplex, foliosus, articulatus, basi vaginatus. Folia lanceolata, sessilia, subcoriacea, obtusa, subcarinata, mucronata. Flores in apice caulis, racemosi, parvi, alterni, pedicellati, bracteati. Racemi simplices vel subramosi, cernui. Sepala concava, coniventia, intus purpureo punctata. Labellum et petala flavescentia.

Aus dem kriechenden Rhizom treiben mehrere einfache gegliederte Stängel von 1' Länge. Ueber der Wurzel sind dieselben so dick wie Rabenfedern; gegen die Mitte nimmt die Dicke zu und ganz oben nimmt sie wieder ab. Fünf bis sechs Blätter stehen wechselsweise an den obern Gliedern. Die untern sind von trocknen

weisslichen Scheiden umgeben. Nach dem Verblühen oder mit dem Alter sterben die Blätter selbst des obern Theils der Stängel ab [und hinterlassen den untern Theil in Gestalt eines länglichen, etwas gebogenen Pseudobulbus zurück, welcher theils nackt ist, theils mit den Ueberresten der Scheiden umgeben bleibt. — Die Blätter sind lineal-lanzettlich, 3—4 Linien breit, 4—5 Zoll lang, oben stumpf mit Stachelspitzchen, hellgrün und auf dem Rücken mit etwas vorstehender Mittelrippe. Blumen stehen abwechselnd in überhängenden, einfachen oder ästigen Aehren. Blumenstiele kurz, an der Basis mit kleinem schuppenartigen Nebenblatt. Blume hat 1½ Linie im Durchmesser. Aeussere Blumenblätter gegen einander geneigt, hohl, inwendig fein [roth-braun punktirt, äusserlich schmutzig gelb, innere schmal, zurückgebogen, mit Spitze wie ein Haken einwärts gebogen, gelb. Labellum keilförmig, unten glatt, inwendig mit zwei kammförmigen, erhabenen Linien. Aeusserer Rand ist fingerförmig, in drei Theile getheilt, einwärts gekrümmt. Gynostemium kurz, vorn gestutzt, mit Labellum zu becherförmigem Körper verwachsen. Anthere vierfächerig, platt, stumpf, herzförmig. Pollenmassen vier, je zwei mit Fäden verbunden. — Aus Mexico eingeführt. Blühte bei Herrn van der Maelen.

Huc etiam: *Sarcadenia gracilis* H. Paris.

1400. ORNITHIDIUM *Salisb.*

Hort. Trans. I. 293.

I. Rhizomate repente pseudobulbifero.

1. ORNITHIDIUM SOPHRONITIS Rchb. fil. Bonpl. II. 18:

Rhizomate repente ramoso squamis oblongis acutis nervosis carinatis vestito, squama sexta pseudobulbifera, pseudobulbo oblongo pyriformi foliis quaternis suffulto, folio infimo squamaeformi arpophyllaceo, insequente apice parvilaminato, summis laminis oblongis apice inaequali acutiusculis praeditis, folio apicilari cuneato ligulato apice bilobulo, pedunculis solitariis nunc geminis axillaribus in foliis fultientibus univaginatis, sepalis ovatis acutis, tepalis rhombeis obtusis plusquam duplo minoribus, labello unguiculato trilobo erecto, lobis lateralibus quadratis seu triangulis obtusangulis, lobo mediano triangulo seu subcordato acutiusculo refracto, callo magno in disco inter lobos laterales, gynostemio gracili apice utrinque angulato, cum labello synarthrosi juncto, rostello trilobo.

Ein liebliches Pflänzchen, welches im Hochgebirge prächtige Rasen bildet. Die Blüthen, grösser als die einer grossblüthigen Sophronitis pterocarpa, sind brennend roth („as red as a soldiers jacket"), die Lippe gelb, der Mittellappen mit einer rothen Linie rings vor dem Saume. Tovar. Juli. Moritz. 863, Guareima. Juli 1844. 4000'. Wagener.

II. Rhizomate erecto seu ascendente.

a. Labellum bene unguiculatum.

— Ebulbes visae. —

2. ORNITHIDIUM AGGREGATUM Rchb. fil. Bonpl. II. 18, (*Dendrobium aggregatum* Kunth. Hb. Bpl. I. 358. Maxillaria? aggregata Lindl. O. 151):

Caulescens, caulibus validis radicantibus ramosis, ramulis vaginis valde arpophyllaceis tectis, foliis summis adhuc laminiferis, vaginis dilatatis arpophyllaceis, laminis oblongis utrinque attenuatis, apice subinaequalibus, valde coriaceis, floribus ex vaginarum axillis fasciculatis, illis O. miniati paulo minoribus, bracteis scariosis, lanceis ovariis pedicellatis quintuplo brevioribus, perigonio carnoso, sepalis ovatis acutis,

tepalis ligulatis acutis, labello erecto primum lineariligulato canaliculato, dein in laminam cordatam plica in unguem transeuntem dilatato, gynostemii androclinio tricorni, tabula prominula in gynostemii basi.

3. ORNITHIDIUM DISTICHUM Lindl. sp. Benth. Pl. Hartwg. p. 153:

Rhizomate sarmentoso lignoso, foliis distichis carnosis lineari-oblongis, obsolete serrulatis, sepalis glabris, labello unguiculato, ovato recurvo apice undulato per axin carnoso. Folia sesquipollicaria. Radices longae durae simplices.

In arboribus prope Loxa.

4. ORNITHIDIUM GIGANTEUM Lindl. sp. in Benth. Pl. Hrtwg. p. 153. Aug. 1845:

Caule erecto crasso folioso, foliis distichis ensiformibus equitantibus, labello unguiculato laevi ovato cucullato sub apice cavo mucronato et calloso, petalis obovatis obtusis sub apice carnosis.

4—6 pedes altum, in terram, in praeruptis humidis Cordillerae juxta Loxa.

5. ORNITHIDIUM SERRULATUM Lindl. sp. in Benth. Pl. Hartwg. 153. Aug. 1845:

Caule erecto ramoso, foliis lineari-oblongis apiculatis serrulatis, sepalis basi connatis, labello sigmoideo apice carinato concavo per axin carnoso, margine membranaceo. Ovarium triquetrum subrostratum.

Cordillera : Loxa.

6. ONITHIDIUM AUREUM Pöpp. Endl. N. Gen. et Sp. I. p. 57. Tab. XCVI:

O. foliis imbricato vaginantibus, ensiformibus, acutissimis; pedunculis axillaribus fasciculatis, nutantibus; sepalis obtusissimis; labello apice incrassato. Crescit in Peruviae transandinae sylvis montosis ad praedium Pampayaco. Floret Februario.

Caules ex eadem radice simplice, parasitica arborum excelsiorum plures, tres ad quinque pedes longi digitum rassi, decumbentes, extremo apice ascendentes, simplices, interdum radiculas repentes subtus exserentes lignosi, vaginis emortuis vestiti, inferne nudi, teretes, apice modo foliosi ac floridi, compressi, bulbis uti videtur expertes. Vaginae terminales distichae, arcte imbricatae, approximatae, compressae ancipites, basi amplexicaules, vix patentes, apice oblique truncatae, angulo anteriore superiore in acumen excurrentes, planae, nervis obtuse elevatis percursae, coriaceae, rigidae, laevissimae, nitidae, virides. Folia cum apice vaginarum truncato articulata, caduca, ima basi vaginantia, compressa, ancipitia, superne plana, inferiora patentia, superiora erecta, terminalia stricta, omnia ensiformia, acutissima, apice integerrima, nervis percursa decem ad duodecim, utrinque prominentibus, primario reliquis paulo crassiore, subcoriacea, glabra, laevia, nitidissima, pulchre viridia, pedem longa vel parum breviora, pollice uno paullo angustiora. Pedunculi sex ad decem ex imis vaginarum axillis nati, fasciculati, inaequales, sub anthesi nutantes, teretes, tenues, articulati, recti neç flexuosi, uniflori, vaginati, bracteati, duos ad quatuor pollices longi. Squamae ad fasciculorum basin ovatae vel oblongae, acutae, erectae, magnae, membranaceo emarcidae, pellucidae, tenues, nervosae, badiae. Vaginae in inferiore pedunculi parte natae cylindricae, integrae, acuminatae, mucronatae, adpressae, tenues, membranaceae, ad medium pedunculum usque prolongatae. Bracteola minuta sub ovario, semiamplexicaulis, subrotunda, acuta, concava, margine membranacea. Ovarium teres, basi incrassatum, glabrum, exsiccatione atrum. Perianthium rectum haud resupinatum, aureum, junius flavum, globoso campanulatum, nucleum cerasi magnitudine circiter aequans. Sepala erecta, dorso convexa, apice conniventia, ovata, vel ovato oblonga, lata, obtusa, sessilia, invicem libera: exteriora subaequalia, interioribus paullo breviora. Labellum ante columnae basin accretum, medio geniculatum, inferne angustatum et utrinque auriculatum, superne dilatatum, subrotundum, lobulo terminali ovato appendiculatum, auriculis lobisque columnam amplectens, concavum integerrimum, glabrum, membranaceum. Columna labello bre-

vior, reclinata, semiteres, subcylindrica, apice parumper incrassata, sessilis, haud in processum basilarem protensa, fovea terminali antherae destinata paullo obliqua ac postice spectante, marginata, caeterum nuda. Stigma subterminale, antice obliquum margine baseos prominente, utrinque ala trigona, acuta, membranacea patente. Anthera depresso plana, ad medium dorsum usque carinata. Pollinis massae bigeminae, aequales haud cavae nec vaginantes, parallelo laterales.

— Pseudobulbiferae. —

7. ORNITHIDIUM DENSUM Rchb. fil. Bonpl. III. 217. *Maxillaria densa* Lindl.:

Perigonii sepala lanceolata acuminata, lateralia labello supposita. Tepala lanceolata duplo minora. Labellum arrectum ab ungue immobili ac gynostemio producto, trilobum; lobi laterales trianguli postici, erecti, lobus medius ligulatus (hinc poteris labellum dicere obtuse sagittatum) carina obtusa semilunata transversa inter lobos laterales foveam mucosam antice cingens quae unguem usque producitur. Gynostemium semiteres. Androclinium immersum apice fissum supra foveam obtuse triangulam utrinque brachiato productum. Anguli gynostemii laterales pone rostellum paulo retrorsi. Anthera obtuse conica cum apiculo. Pollinia sphaeroidea aequalia flava. Caudicula linearis cum glandula molli.

Huc: *Maxillaria densa* Lind. B. Reg. 1836. XXI. 1804:

Pseudobulbis oblongis compressis axillaribus monophyllis, foliis oblongo-lanceolatis obtusis emarginatis, racemis axillaribus densissime aggregatis, bracteis cucullatis, perianthiis bilabiatis, sepalis carinatis lineari lanceolatis acuminatis, petalis paulo minoribus, labello oblongo indiviso apice recurvo et canaliculato, medio linea transversa elevata.

Mexico.

8. ORNITHIDIUM TAFALLAE Rchb. fil. Bonpl. II. 18. (*Scaphyglottis Tafallae* Rchb. fil. Linnaea XXII. 855):

Eine Nectargrube am Grunde der kolbigen Säule. Meine Beschreibung ist ganz richtig, allein zu einer Zeit niedergeschrieben, wo mir die gespentische Endlicher-Pöppigsche Gattung Scaphyglottis etwas zu sein schien, während sie mir jetzt nichts ist, als ein Gemengsel von Ponera und Ornithidium, sowie Isochilus R. Br. eine Farrago von Isochilus und Ponera. Jedenfalls gehört hierher auch die *Scaphyglottis pendula* Endl. Pöpp. Legt man Exemplare von Ruiz und Pavon und Pöppig neben einander, so bezeichne man sie ja vorher: es ist ganz unmöglich, sie zu unterscheiden. Wo der letztgenannte Sammler seine Details schöpfte, die von den meinen bei *Sc. Tafallae* so himmelweit verschieden sind, weiss ich nicht. In der Kapsel, die bei den Originalen Pöppigs liegt, finden sich auf einem Stück Visitenkarte 2 halbreife spindelförmigem Fruchtknoten mit Säule und zerstörtem Perigon, dazu die Notiz „Dinema").

b. Labellum sessile seu subsessile.

— Ebulbes visae. —

9. ORNITHIDIUM NUBIGENUM:

Caule crasso, vaginis membranaceo praecinctis ceterum coriaceis lanceis acuminatis, sepalis oblongis acutis, tepalis angustioribus, labello cuneato obovato apice in ligulam cochlearem apice involuto emarginatam expanso, tumore altero in basi, altero in disco, columna crassa.

Pamplona les Vejas 1848. Funck und Schlim. (Herb. Lindl. Rchb. fil.)

10. ORNITHIDIUM SEMISCABRUM Lindl. in Benth. Pl. Hartweg. pg. 153. Aug. 1845:

Rhizomate sarmentoso lignoso, foliis ensiformibus in bulbum solitariis serrulatis apice obliquis, sepalis apice scabris, labello oblongo obtuso sub apice undulato calloso. — Folia recta, 4—5 pollices longa, radices longae durae simplices.

In montibus Paccha.

11. ORNITHIDIUM BICOLOR Lindl. sp. in Benth. Pl. Hartwg. p. 153. Aug. 1845:

Foliis lanceolatis scapo simplici paucifloro flexuoso subaequalibus, sepalis petalisque ovatis acutis subundulatis aequalibus, labello unguiculato obovato apiculato basi obtuso, denticulis quibusdam (6) in unguem, columnae brevis alis decurvis serratis. — Flores violacei labello magno luteo.

Prope Limam. (Non ab Hartweg lectum).

12. ORNITHIDIUM NIVEUM Lindl. Orch. Lind. 1846. p. 20:

Foliis oblongis obtusis margine scabris, sepalis acuminatis, petalis acutis membranaceis, labello apice oblongo apiculato piloso, columnae facie pubescente.

„Terrestrial from the forests of Jaji in Merida, at the height of 6000—7000′. July. Pseudobulbs roundish, oval, compressed. Flowers small, entirely white." Nr. 1476.

13. ORNITHIDIUM SANGUINOLENTUM Lindl. Orchid. Lind. 1846. Nr. 117. p. 22:

Foliis oblongis obtusis margine scabris, sepalis acuminatis, petalis acutis membranaceis, labello apice ovato acuminato undulato pubescente, columnae facie pubescente.

„In habit like O. coccineum. Flowers bright yellow, with a bloodred spoot on the lip. Damp forests in the neighbourhood of Merida at the height of 5500. Jun. Juli. (N. 640.) Perhaps a variety of the last (Ornithidium niveum).

ORNITHIDIUM SANGUINOLENTUM Lindl. (*O. serrulatum* Lindl.? (sic!) β. acuminatum: perigonii phyllis externis acuminatis, labello in disco bicornuto" Rchb. fil. in Linnaea). Rchb. fil. in Bonpl. II. 18:

Ich bin durch einen Glückszufall, endlich [zur richtigen Bestimmung gelangt: Herrn Wageners Exemplar ist so schnell getrocknet, dass der rothe Fleck auf der Lippe erhalten ist. („Flowers bright yellow, with a bloodred spot on the lip"). Dazu liegt mir Herrn Lindens citirte Nr. 640 vor. Es heisst Orchid. Lind. 22): labello apice ovato acuminato undulato pubescente. Ich sehe weder Wellenrand noch Behaarung, aber zwei grosse Hörnerschwielen auf der Mitte, zwischen ihnen zwei kleinere: das wäre zu erwähnen gewesen!! (Hierher Moritz 1072, 1077). Merida. 6000′. Wagener.

— Pseudobulbiferae. —

14. ORNITHIDIUM RUBERRIMUM Rchb. fil. Huc: *Scaphyglottis ruberrima* Lindl. Pl. Lindl. 1846. p. 22. N. 113:

Foliis lineari oblongis obtusis oblique emarginatis, pedunculis unifloris bractea longioribus, sepalis ovatis acuminatis, petalis acutis, labello ovato recurvo obtuso undulato medio obsolete bilamellato.

An epiphyte with bright red flowers, from the forests near Merida!, at the height of 5000′. July. (N. 667.)

Obs. Labellum non bilamellatum, sed callo ligulato instructum, cujus apex obtusus altius per labellum transgreditur. Illius margines tantum cl. Lindley vidit. Credo labello undulato ab insequenti diversum', licet valde affine.

15. ORNITHIDIUM JENISCHIANUM Rchb. fil. Bonpl. II. 18:

Caulescens, ramosum, caulibus basi gracilioribus apice clavatis, seu totis clavatis, seu internodio penultimo incrassato pseudobulbosis, pseudobulbo pyriformi (rotundato?) vaginato, vaginis membranaceis minutissime rugulosis ostio fisso triangulis, foliorum vaginis rudibus nervosis transverse rugulosis limbo membranaceo, laminis ligulatis apice subaequali obtuso seu bilobulo obtusis coriaceis, basi a radicibus adventitiis simplicibus ramosisve perforatis, pedunculis solitariis seu geminis ex axillis foliorum exsertis, vagina inferiori membranacea infundibulari retusa, dorso falcato apiculata, superiori lancea, sepalis tepalisque ovatis acutis, labello erecto, trilobulo, lobis lateralibus obtusangulis, lobo medio retuso subemarginato refracto, callo antice acuto seu obtuse bilobo in hujus basi, gynostemio erecto, synarthrosi cum labello juncto, apice trilobo, lobis lateralibus porrectis, rostello inermi exciso semilunato, fovea stigmatica triangula, polliniorum caudicula ligulata cornea.

Eine prächtige Pflanze mit schönem, bis 2 Zoll langen Laube, das mit dem indischer Formen verglichen werden kann. Die Blüthen wenig kleiner als die des O. Sophronitis, brennend roth, innerlich heller, die Lippe violett. Als Ornithidium ist die Pflanze unbeschrieben. Es existirt jedoch eine gewisse *Scaphyglottis ruberrima* Lindl., deren oben so dürftige, als weit umfassende Definition einer Masse Arten angepasst werden könnte, ohne alle Garantie richtiger Bestimmung. Es ist aber höchst unwahrscheinlich, dass diese gemeint wurde. Herrn Senator Jenisch gewidmet. Die Ornithidien sind lange noch nicht genügend von unsern Sammlern berücksichtigt; sie enthalten Gestalten von indischem Typus, so ist das O. giganteum, eine Entdeckung Humboldt's, ein Gewächs, dessen Laub es an Schönheit mit dem jeder Vanda aufnimmt. Truxillo. 7000'. Januar. Wagener.

16. ORNITHIDIUM MULTICAULE Rchb. fil. Bonpl. II. 18:

So ist in Zukunft der *Siagonanthus multicaulis* Endl. Pöpp. zu bezeichnen. Die Hakenleiste unterseits der Lippe existirt nicht.

SIAGONANTHUS MULTICAULIS Endl. Pöpp. N. G. et Sp. Pl.:

sepala superiora erecta, inferiora patula, cum processu columnae connata. Labellum adscendens, infractum, basi aequale. Columna basi breviter producta cum labelli ungue articulata. Anthera terminalis opercularis. Pollinis cereacei massae quatuor per paria connatae, caudicula brevi glandulae stigmatis deltoideae adfixae. — Crescit cum praecedentibus (prope Pampayaco). Floret Februario.

Caules sex ad decem basi juncti, radicibus numerosis repentibus arborum ramis adfixi, penduli et parte inferiore adscendentes, vel in ramis prostrati, apice assurgente, strictissimo, simplices vel etiam divisi, teretes, vaginis vetustis, remotis vestiti, radiculam unam alteramve exserentes, cortice lacero, fibroso, emarcido, cinnamomeo, intus lignosi atque flavi, inferne digitum crassi, superne diametro pennam cygneam aequantes, apicem versus bulbos foliaque ferentes et vaginarum recentiorum et emortuarum mole capitato incrassati. Vaginae alternae, imbricatae, distichae, compressae, ancipites, apice truncato cum foliis articulatae ac angustiores, inferne latiores ac semiamplexicaules, adpressae, coriaceae, rigidissimae, striato nervosae, glaberrimae, laevigatae, pallidius virides, emortuae tandem badiae. Folia cum apice vaginarum articulata, incrassata, superne in laminam dilatata lineari oblongam, apice paullisper angustatam, obtusatam mucronatam, vel leviter bifidam, laciniis interdum inaequalibus, obtusis, planam, multinervem, nervis supra prominulis, pallidis, subtus excepto intermedio haud conspicuis, laete viridem, rigidam, haud carnosam. Bulbus, dum adest, in apice caulis terminalis, ovatus, compressus nec anceps, angulis multis obtuse prominentibus ac totidem sulcis exaratus, extus coriaceus, laevis, intus carne viscida, viridi, insapida, inodora, apice vel nudus, vel folium solitarium reliquis con-

forme gerens, basi foliis caulinis vicinis vaginatus. Pedunculi axillares numerosi, fasciculati, uniflori, divaricati quandoque nutantes, inferne bracteis alternis, cylindricis vestiti, superne nudi, teretes, haud flexuosi, uniarticulati, pollice parum longiores. Ovarium cylindricum, tenue. Flores recti nec resupinati, mediocres, sordide albidi, labello roseo, sepalis infimis patulo deflexis, primo visu diversum genus indicare videntur. Sepala omnia plus minusve laxa, invicem haud contigua, acutiuscula: superiora tria erecta, supremum lineare lanceolatum, paullo convexum, interioribus convergentibus, inferne attenuatis, obliquis longius: infima cum processu columnae brevi subtus connata, basi truncata ovataque, apicem versus attenuata, obliqua, laxa, deflexa, inde sacci congenerum vix vestigia praebentia. Labellum cum columnae processu articulatum, ad mediam laminam ascendens, concavum', superne laxum, deflexum, lateribus revolutum, sepalis longius, obovato oblongum, integrum, obtusum, antice emarginatum, denticulatum, tenuissime ciliatum supra nudum, subtus carina ancipite, apicem versus in mucronem uncinatum, membranaceum excurrente armatum. Columna basi breviter producta, caeterum tenuis, curvata, apice incrassata, nuda, labelli parte adscendente longior, sepalis brevior, alba. Anthera galeam referens, conica, obtuse apiculata, subdidyma, valde carnosa, intus bilocularis. Pollinis massae bigeminae, inaequales, majori minorem, inferne subconnatam vaginante. Operculum glandulae stigmatis deltoideum, denticulatum.

17. ORNITHIDIUM MINIATUM Lind. Bot. Reg. XXXI. 1845. Misc. 65:

Caulescens, pseudobulbiferum, foliis oblongo-loratis patentibus apice oblique rotundatis mox margine serrulatis, floribus axillaribus laxe exsertis, pedunculis unifloris, sepalis petalisque ovatis acutis glabris, labello basi concavo nectarifero apice trilobo, laciniis lateralibus brevibus obtusis ascendentibus intermedia late ovata vel retusa subundulata.

Habit of Ornithidium coccineum, but it is much handsomer, having rich crimson flowers. Lip quite differently lobed and partially turned downwards: it is of yellow colour but edged and blotched with crimson. Columbia.

Ornithidium miniatum Lindl. Rchb. fil. in Bpl. II. 18. Caracas. Wagener.

18. ORNITHIDIUM VESTITUM Rchb. fil. *Cymbidium vestitum* Sw. *Camaridium vestitum* Lindl. Huc: *Ornithidium parviflorum* (*Scaphyglottis parviflora* Endl. Pöpp.) Rchb. fil. in Bonpl. II. 19:

Caulescens: caule repente, densissime paleaceo vaginato, hinc pseudobulbifero, radicibus ramosis tenuissimis, pseudobulbis oblongoligulatis compressis nunc diphyllis, foliis ligulatis utrinque attenuatis, apice acutiusculo retusis, vaginis stipantibus carinatis lanceis pseudobulbo ipsi subaequalibus, florum minutorum fasciculis ex axillis vaginarum stipantium, pedunculis sqamatis, bractea falcata flosculum subaequante, mento magno, sepalis oblongis acutis, tepalis angustioribus, labello a cuneata basi dilatato, medio trilobo, lobis lateralibus obtusangulis abbreviatis, lobo medio ligulato obtuso longe producto, carina transversa medio antice emarginata inter utrumque lobum lateralem, fovea in basi, gynostemio crasso, androclinio utroque angulo antice breviter brachiato, stigmatis labio inferiore prominulo.

Blüthen weiss. Caracas. Wagener. Auch in unsern Gärten nicht selten, z. B. als *Maxillaria ignea* (!!) u. s. w.

MAXILLARIA EXIGUA Rgl. (*Sophronitis ochroleuca* H. Petropol) Ind. Hort. Petrop.:

Caulescens, caule radicante pseudo-bulbifero, vaginis membranaceis acutis vestito. Pseudobulbi ovati vel oblongi, compressi, ancipites, deinde sulcati, usque pollicem longi et ad $^{3}/_{4}$ pollicis lati, basi vaginis distichis convexis fulti, apice folium unicum ferentes. Folia lineari-lanceolata, acuta, coriacea, carinata, usque 3 pollices longa et $^{1}/_{2}$ pollicem lata. Racemi axillares 2—4-flori; pedunculo brevi, bracteis distichis imbricatis concavis acuminatis munito; floribus minimis, ochroleucis, immaculatis; pe-

dicellis bracteatis, bracteis lineari-lanceolatis membranaceis florem superantibus. Sepala ovata, vix acuta, patentia, lineam longa, lateralia columnae basi breviter connata, supremum lateralibus angustius. Petala ovato-lanceolata sepalis paullo breviora, erecto-patentia. Labellum e basi cuneata hastato-trilobum, petala aequans, lobis lateralibus incurvis, lobo intermedio sublinguaeformi obtuso, callo transverso basilari. Columna semiteres, aptera, brevis. Pollinia 2, bipartibilia. Maxillariae densae affinis et fortasse *M. prolifera* Fl. Peruv.

Huc: *Maxillaria surinamensis* Focke Mss.

19. ORNITHIDIUM COCCINEUM Salisb. l. c.

1401. ACRIOPSIS *Reinw.*

Bot. Zeit. 1825. v. 2. p. 4.

1. ACRIOPSIS JAVANICA Reinw. l. c. Huc: *Acriopsis picta* Lind. B. Reg. XXIX. Misc. 105:

Pseudobulbis ovatis, foliis solitariis linearibus canaliculatis patulis, emarginatis, scapo paniculato, labello laciniis lateralibus triangularibus, intermedia elongata lineari disco bilamellato, columnae brachiis 2 glandulosis.

Small flowered, with the habit of Sarcanthus pallidus. — Flowers white and green with a dull purple stain at the point of the 4 segments of the perianth, and the same colour on the disk of the lip, leaving a white border all round.

Bantam, in the virgin forests of Datarbjaay and Bodjomanik on the river Tjileman obtained by Mr. Adolph Papeleu, one of the partners in Mr. Van Houttes Nourserry.

2. ACRIOPSIS INDICA R. Wight Ic. V. t. 1851. 1748. 1:

Lip ovate, cordate, somewhat undulated, entire, without a crest.

Habitat? Two lateral sepals united. Antherbed covered by a vaulted membrana or veil.

3. ACRIOPSIS DENSIFLORA Lindl. B. Reg. 1847. sub 20.:

Pseudobulbis ovalibus, racemis multifloris cylindraceis pedicelli internodiis longioribus, labello pubescente panduriformi lacinia media rotundata subemarginata, lateralibus acutis; dente elevato fisso in medio, clinandrii cucullo integerrimo rotundato.

Flowers compactly in racemes 2'' long. Small delicately marked with brown upon yellowish green, lip rose colour bordered with white.

Borneo. Lowe.

4. ACRIOPSIS GRIFFITHII Rchb. fil. Bonpl. II. p. 92.:

aff. A. densiflorae: racemo rarifloro, labelli lobis lateralibus lobato triangulis, lobi medii ligulati acuti in basi lamellis 2 subquadratis, androclinii cucullo retuso.

Acriopsis Griff. CCCXVIII. Affinis etiam A. pictae, quae recedit pseudobulbo monophyllo, panicula virgata, gynostemio gracili, labello altius inserto, lamellis brevioribus, labelli lobis lateralibus rotundatis.

1403. ORNITHOCEPHALUS *Hook.*

Exot. Flora t. 127.

a. Labellum abbreviatum duplo latius quam longum.

1. ORNITHOCEPHALUS BICORNIS; Lindl. in Belch. Voy. of the Sulphur 172. Cf. Walp. l. c. I. 781.

b. Labellum extensum latitudine sua bene longius.

† Apice acutum.

2. ORNITHOCEPHALUS GLADIATUS Hook. l. c.

3. ORNITHOCEPHALUS INFLEXUS Lind. Ann. Nat. Hist. IV. 1840. 384:

Sepalis acutissimis erectis carnosis, petalis rotundatis serrulatis, labello oblongo acuto concavo apice inflexo, margine baseos utrinque calloso.

Mexico. Hartweg.

Lindl. in Benth. pl. Hartwg. 72: Jochiapam inter Oaxaca et Veram Crucem Mexici. Hartweg. l. c. 93: in praeruptis prope Santa Rosa Mexici Hartweg.

Huc: ORNITHOCEPHALUS MEXICANUS Rich. et Gal. Ann. sc. nat. 1845. Jan. p. 24:

Foliis equitantibus gladiatis, spicis radicalibus folio brevioribus, labello ovali oblongo subacuto, lamina crassa concava aucto. Mexico.

4. ORNITHOCEPHALUS MYRTICOLA Lindl. Ann. nat. hist. IV. 1840. p. 383:

Racemo pendulo hispido, sepalis lateralibus petalisque rotundatis integerrimis reflexis ciliatis, labello cordato-lanceolato acuminato canaliculato, callis baseos marginantibus distinctis integerrimis.

Citri odorem spirat In Myrtaceis Brasiliae prope Bom Jesus de Bananal, Majo, Descourtilz.

A very curious plant with short pendulous racemes of small white flowers. Habit of Oncidium iridifolium.

5. ORNITHOCEPHALUS ELEPHAS Rchb. fil. Mss. 1854:

Foliis equitantibus ensiformibus acutis, rectis seu obliquis, pedunculos nunc aequantibus, pedunculis ancipitibus, tenuibus parcissime integri alatis, bracteis triangulis, cordatis (nunc basi cuneatis!) minute denticulatis, abbreviatis, sepalo summo naviculari cucullato acutiusculo, sepalis lateralibus externis latosemilunatis apiculatis, tepalis late cuneato reniformibus denticulatis, labello basi bilamellato, lamellis erectis obtuse triangulis, lamina angusto lanceolata, acuto naviculari, ante lamellas erecta, lamellis multo longiori, columna curvula, androclinio immarginato, processu rostellari introrsum curvato. Guatemala am Fluss Torre 1332. Friedrichsthal (Wiener Museum!)

6. ORNITHOCEPHALUSI IBIS Rchb. fil. Mss.:

Foliis equitantibus gladiatis cuneato oblongis obtuse acutis, radicibus hispidis, pedunculo paucifloro, bracteis cordato ovatis acutis limbo dorsoque calvis, ovariis pedicellatis ovato reniformibus limbo calvis, labelli auriculis triangulis angustis, lamina oblonga acuta, callo transverse ovato antice et postice emarginato, apiculo utrinque ad angulos laterales posticos. — Arima Trinit. Crueger.

7. ORNITHOCEPHALUS APICULATUS Lind. Ann. of nat. hist. IV. 1840. p. 383.:

Foliis racemo erecto denso multifloro multo brevioribus, petalis oblongis dentatis, labello ovato concavo basi sagittato integerrimo apiculo membranaceo acuto.

Peruvia. Pavon.

Very small, 2—3'' high, with flowers apparently deep yellow.

8. ORNITHOCEPHALUS CHLOROLEUCUS Rchb. fil. Bonpl. III. 226:

aff. myrticolae Lindl.: labelli hypochilo ovato transverso carnoso in basi gynostemii utrinque semicordato medio paulo dentato; dente inflexo a medio antice in discum; epichilio membranaceo ligulato trinervi.

Folia genuina. Pedunculus gracilis hispidus. Bracteae naviculares carinatae acutae ovariis pedicellatis breviores, margine et carinae hispidae. Sepala oblongoligulata. — Perigonium album nervis viridibus

Aus Brasilien eingeführt von Herrn Consul Schiller, cultivirt von Hrn. Stange.

9. ORNITHOCEPHALUS IRIDIFOLIUS Rchb. fil. Mss. 1854:

Foliis ensiformibus falcatis acutis medio dilatatis, pedunculos duplo superantibus, vaginis utrinque lato membranaceo alatis, alis apice acutiusculo assurgente denticulatis, pedunculis ancipitibus flexuosis alatis, alis hinc illinc denticulatis ex dorso bractearum carinatarum descendentibus, sepalis cuneato-ovatis acutis, concavis, tepalis duplo majoribus a basi late cuneata flabelliformibus, margine externo rotundato denticulatis, labelli abbreviati lato triangularis callis baseos rhombeis, extrorsum hinc dentatis, hinc inde papulosis lamina duplo brevioribus, at quovis callo labelli plusquam aequilato, columnae humilis processu rostellari lato, crasso, inferne carinato, stigmate suprabasilari, caudicula bis flexa: ante laminam basilarem et ante apiculum glanduliferum; androclinio immarginato.

Die Blätter etwa 5 zöllig, in der Mitte ⅓ Zoll breit. Die Blüthen so gross, wie die der *Stelis grandiflora*.

Zacuapan in Mexico. Leibold! Ein Exemplar in Alkohol.

10. ORNITHOCEPHALUS BONPLANDI Rchb. fil. Mss.:

Foliis ensiformibus subfalcatis acutis pedunculo brevioribus, pedunculis ancipitibus recurvis alatis, alis angustis denticulatis, bracteis triangulis, cordatis, subintegerrimis, sepalis oblongis apiculatis, tepalis a basi late cuneata flabellatis integerrimis, labelli callis obliquis obtuse triangulis retrorsis, erectis, lamina oblonga acuta, naviculari curvata.

Ex herb. Bonplandi.

† † Apice dilatatum.

11. ORNITHOCEPHALUS FALCATUS Focke Tidsch. Wis. Nat. Nat. Wetsch. I. 1848. 211:

Foliis distichis basi equitantibus cum basi articulatis dimidiato falcatis acutis glaucescentibus, sepalis orbiculatis mucronatis concavis retroflexis, supremo fornicato, petalis majoribus, spatulatis incurvis apiculatis, labello basi cordata solida medio constricto lamina oblonga apice rotundata conica incurva margine reflexa.

Herba parvula, epiphyta, acaulis. Radices pubescentes, teretes, albidae. Folia disticha, basi equitantia, cum pede articulata, carnosa, dimidiato falcata acuta, subglauca, latere inferiore leviter canaliculata. Racemi axillares erecti, demum nutantes, foliis longiores, bracteati, 4—9 flori. Bracteae persistentes alternae, amplexicaules, fere perfoliatae, patentes oblongo cordatae, acutae, marginibus et apice reflexae. Flores albi. Perianthium patens. Sepala orbiculata, mucronata, concava, retroflexa, supremum fornicatum, lateralia labello supposita, extus viridescentia, intus albida. Petala spathulata, sepalis majora, incurva, apiculata, alba. Labellum basi cordata solida laete viridi, medio constrictum, lamina oblonga obtusa concava incurva margine reflexa, alba. Columna erecta, brevis, longe rostrata. Rostellum subulatum cum labello parallelum. Anthera opercularis, sub 4 locularis rostello conformis. Pollinia 4, globosa, cruciatim caudiculae affixa. Caudicula longitudine rostelli lineari angusta apice cuneato dilatata, in rostello explanata. Glandula ovali-rotundata, in apice rostelli. Capsula ovata, triquetra, trialata inter alas tricostatas in pedunculum brevem attenuata.

In Crescentia Cujete. Onoribo. Distr. Para. Oct.

12. ORNITHOCEPHALUS CILIATUS Lindl. Ann. nat. hist. IV 1840. p. 384:

Sepalis petalisque latioribus membranaceis rotundatis reflexis ciliato-fimbriatis, labello carnoso cordato canaliculato acuminato apice dilatato obtuso membranaceo, rhachi hispida.

Demerara. Loddiges.

Nearly related to Myrticola, from which it diff. in its fringed pet. and in the dilated rounded membranous apex of its fleshy lip.

Hook. Lond. J. II. 1843. p. 672. British Guiana. Schomburgk !

13. ORNITHOCEPHALUS GRANDIFLORUS Lindl. Ann. sc. nat. hist. IV. 1840. p. 383:

Racemo erecto stricto glabro, bracteis oblongis obtusis herbaceis, petalis labelloque cymbiformi saccato denticulatis, basi cristata biloba transversa carnosa erosa aucto, clinandrio marginato denticulato.

Brasil. mont. Organ. Gardner 653.

Large yellow flowers. Fine sp. The leaves are oblong, obtuse, obscurely veined and apparently much thinner than is usual in this genus.

14. ORNITHOCEPHALUS KRUEGERI Rchb. fil. Mss.:

Foliis ensiformibus ligulatis apiculatis, radicibus calvis, pedunculo hispido sursum racemoso, bracteis triangulo navicularibus arctis supra nervum medium et limbo hispido papillosis, ovariis pedicellatis hispido-papillosis, sepalis tepalisque cuneato ovatis, serrulatis, sepalis extus papillosis, labello trilobo, lobis posticis semiovatis angustissimis, lobo antico flabellato apice retuso serrulato dente medio maximo, callo cochleato intus tomentoso in basi labelli antice medio in dentem planum apice serrulatum excurrente.

Trinitatis Insula. Krüger.

15. ORNITHOCEPHALUS AVICULA Rchb. fil. Wullschlg. Mss.:

Foliis ensiformibus cuneato oblongis acutoacuminatis, radicibus parce papilloso muriculatis, pedunculo hispido sursum racemoso, bracteis ovato triangulis dorso ac limbo hispidulis, ovariis pedicellatis hispidopapillosis, sepalis tepalisque bene majoribus cuneato ovatis, sepalis limbo parce serrulatis, dorso hinc papillosis, tepalis limbo serrulatis, labello trilobo ligulato, lobis posticis prope obliteratis, lamina antice ligulato flabellata antice emarginata cum apiculo.

Surinam. Wullschlaegel.

1404. CIRRHAEA *Lindl.*

Bot. Reg. 930. obiter sub Rodriguezia secunda H. B. Kth.

a. Labelli pars antica saccata.

1. CIRRHAEA SACCATA Lindl. Bot. Reg. XXV. Misc. 121. (1839:)

Pseudobulbis ovatis obtuse tetrapteris inter angulos costatis, foliis oblongis plicatis sub-septem-costatis in pseudobulbo, omnino sessilibus, scapo pendulo trigono; racemo multifloro, sepalis oblongis obtusis lateralibus margine revolutis, petalis lineari-lanceolatis obtusis basi teretibus compressis, labelli lobo medio galeato saccato.

Flowered in Woburn Abbey, Bedford. The middle lobe of labellum has very much the form of many Satyria. General appearance of the other species, but its raceme is nearly a foot long, and the dull yellow geen flowers are twice as large as those of any before discovered.

„Huc: *Cirrhaea fuscolutea*, Hot. Mag. which is a different plant."

Huc: *Cirrhaea fusco-lutea* Hook. Bot. Mag. 1840. 66. 378 b.:

Foliis lato-lanceolatis, petalis lineari lanceolatis, labelli lobo medio ovato concavo, lateralibus-oblongis reflexis hirsutis.

Huc: *Scleropteris* Scheidw. Allg. Gartenz. 1839. 407:

Perianthium patens Sepala libera, aequalia, membranacea. Petala multo angustiora, spatulata, cum columna parallela, carnosa. Labellum unguiculatum cum basi columnae continuum, saccatum, utrinque cornutum. Columna semiteres, arcuata compressa, apice truncata, anthera incumbens membranacea subbilocularis, dissepimentis incompletis, pollinia duo, elongata, compressa, caudicula elongata, obspathulata, glandula ovalis, rostellum longissimum gynizus applanatus exsuccus.

Scleropteris flava Scheidw. l. c.:

Pseudobulbis tetragonis monophyllis, foliis ovato-oblongis acuminatis. glabris, coriaceis, quinquenerviis, racemis radicalibus squamosis filiformibus pendnlis, multifloris atropurpureis. Flores flavi, carnosi, labellum saccatum, apice purpureum.

Planta epiphyta Brasiliensis.

Aeusseres der *Acropera Loddigesii.* Pseudobulbus etwas zusammengedrückt. Blumentrauben wurzelständig, beschuppt, fadig, vielblumig, vollständig hängend, von schwarzbrauner Farbe. Aeussere Hüllblätter ausgebreitet, obere etwas breiter als seitenständige, innere spatelförmig, dick fleischig, etwas gebogen, dieselbe Richtung mit Säule. Das Labellum an der Basis verschmälert, an der Spitze sackförmig, und hat an jeder Seite ein nach der Basis zurückgekrümmtes Horn. Hauptsäule ist halbrund, zusammengengedrückt, gebogen, mit Labellum innig verwachsen, an der Spitze abgestutzt. Anthere ist länglich, liegt auf Rücken der Säule, ist fast zweifächrig mit unvollkommnen Scheidewänden. Pollenmassen 2, mit einer umgekehrten spatelförmigen Verlängerung. Anheftungsdrüse rundlich, etwas ausgehöhlt; Schnäbelchen sehr lang und vorstehend, Narbe ganz flach und trocken. Wachsgelbe Blüthen, Spitze des Labellum purpurfarbig. Stempelsäule an der Spitze unter den vorgezogenen Schnäbelchen senkrecht abgestutzt. Diess ist die Stelle, wo die Narbe sich befindet. Anstatt dass dieselbe, wie bei den meisten Orchideen etwas vertieft und mit schleimiger Masse überzogen ist, ist sie hier ganz flach, und wie es scheint mit Epidermus überzogen.

b. Labelli pars antica plana.

2. CIRRHAEA DEPENDENS Rchb. fil. Mss. Huc: *Cymbidium dependens* Lodd. Bot. Tom. X. 916. *Gongora viridipurpurea* Hook. Bot. 2978. *Cirrhaea viridipurpurea* Lindl. Bot. Reg. 1538.

CIRRHAEA TRISTIS Lindl. Bot. Reg. XXII, (1830). 1889:

Foliis oblongo lanceolatis basi parum angustatis, petalis lineari-spathulatis, labelli sagittali lobo intermedio lineari abrupto acuto lateralibus acuminatis parallelis breviore.

Flores odoratissimi triste purpurei, sanguineo suffusi, apicibus herbaceis. Sepala linearia patentissima obtusa, postremo sigmoideo, reflexo. Petala linearia spathulata sepalis paulo breviora et duplo angustiora. Labellum atropurpureum ungue arcum continuum cum columna resupinata efficiente; limbo sagittato, laciniis lateralibus acuminatis subaequalibus carnosis intermedia fere duplo longioribus. Columna arcuata, clavata, truncata, anthera postica, stigmate obliquo, verticali, cirrhifero, ut in genere.

Rchb. fil. in Schlchdl. B. Z. 1852. 839:

Cirrhaea tristis Lindl. und *viridipurpurea* Lindl. Nachdem ich ganze Massen dieser Pflanzen studirt, kann ich sie nicht mehr unterscheiden. *C. Hoffmannseggii* Heinhold gehört hierher. Ferner eine *C. violaceo virens* Hffgg. 20. Aug. 1844. — eine hübsche

Form mit grünen, äusseren Hüllblättern, deren Spitzen innerlich purpurn punktirt; die inneren seitlichen Hüllblätter am Grunde purpurn, an der Spitze so gewellt auf gelbem Grunde. Seitenlappen der Lippe orangegelb mit roth. Mittellappen grün mit roth oder Mittellappen grün mit Purpurbinde. Das wäre also wohl *C. viridipurpurea* var. *Fryana*. Knw. Westc. Fl. Cab. 1843. III. 94. — *C. violascens* Hffgg. Hüllblätter grün, mit Purpur überlaufen, Lippe gelb, an der Spitze weiss, mit violetten Punkten. — *Cymbidium dependens* Lodd. B. Cab. 996. gehört sicher hierher, und nicht zu *C. Loddigesii*. — *C. livida* Hffgg. und *C. purpurascens* Hffgg. haben beide eine violettröthliche, fast gleichmässige Färbung und die Lippenspitze ist etwas kürzer. Als *C. Russeliana* Lodd. besitze ich aus niederländischen Gärten eine ähnliche Form, nur dass die seitlichen Fortsätze der Lippe kürzer sind. — Zu grösserer Beschwerde versenden fremde Gärtner diese alte Pflanze neu aufgeputzt mit dem Namen *Sarcoglossum suaveolens*.

Huc: *Cirrhaea viridipurpurea* var. *Fryana* Floral Cab. III. 1840. N. 94:

Perigonii foliis externis viridiluteis, petalis rubris, labello apice et basi viridi, purpureo fusco striato, labelli lobis lateralibus et disculo aurantiaco.

Huc: *Cirrhaea Warreana* 1999, Lodd. — Huc ex ill. Lindley (saltem ad adnotat. L. Turnbamgreenii) factam. *C. fuscolutea* Lindley O. 142.

3. CIRRHAEA OBTUSATA Lindl. Bot. Reg. XXIII. 1837. 2005:

Foliis oblongo lanceolatis utrinque acuminatis, petalis sepalisque lineari-oblongis obtusiusculis planis, labelli lobo medio obovato acuto inflexo late unguiculato, lateralibus acuminatis.

Differs from *C. fuscolutea* by its much more obtuse petals and smaller flowers. J believe the form of the middle lobe of the lip to be essentially different in this species from all except *C. pallida* Lindl.

Sepala lutea rubro maculata. Petala et labellum albo, violacea maculata.

4. (var. praecedentis?) CIRRHAEA PALLIDA Lindl. B. Reg. XXIII. 1837. sub 2005:

Has most of the characters of *C. obtusata*, except that the sepals and petals are acuminated and the middle lobe of the labellum placed on a slender unguis. The real value of these distinctions must remain for future inquiry.

5. CIRRHAEA LODDIGESII Lindl. Bot. Reg. 1538.

1405. SARCOCHILUS *RBr.*

Prodr. 332.

(additis: 1477. *Chiloschista* Lindl. 1478. *Gunnia* Lindl. 1493. e. p. *Dendrocolla* Blume, *Ornithario* Lindl., *Pterocerate* Kuhl. v. Hass. *Orsidici* Rchb. fil.).

Lindl. Bot. Reg. XXII. (1336). 1832:

Perianthium patens. Sepala lateralia cum ungue labelli subtus connata. Petala conformia. Labellum calcaratum, cum ungue columnae continuum, calceiforme; lobo intermedio carnoso solido, lateralibus ascendentibus petaloideis. Columna brevissima, marginibus inflexis tenuibus, anthera bilocularis, valvis antherae inferioribus deflexis erosis. Pollinia caudicula lineari affixa glandula deltoidea.

Epiphyta acaulis, vel brevissime caulescens. Folia disticha, linerari-lanceolata, subcoriacea. Racemi axillares, erecti, 3—6 flori, secundi. Bracteae breves, latae, ovatae. Flores mediocres.

I. Aphyllus.

1. SARCOCHILUS USNEOIDES Rchb. fil. Mss. Huc: *Chiloschista usneoides* Lindl. O. 219. Sert. Frontispic. fig. IV:

Wallich 1818 in many diff. places of Nepal on trees.

Root consists of numerous bundles of fleshy, long, glaucous, simple fibres. Of leaves no trace. Racemes numerous, arising from the crown of the root, i. e. from the centre of the radical fibres, 6—8" long, downy. Peduncle brownish, taper, slender, an inch long; furnished with a few alternate membranous bracts, which are ovate, amplexicaule, acute, deciduous, and densely clothed with herbaceous soft semitransparent hairs; finally passing into a flexuose rachis, which becomes clavate when old. Flowers stalked, alterne, the size and colour of Lily of the Valley, but scentless, drooping, placed on stalks ½" long, very slender, with a broad, ovate, subcordate and transparent acute deciduous bract at the base. Segments of the flower oblong, obtuse, spreading, the petals broader than the others and with the lateral sepals adhering by their whole base to a long foot, which quits the base of the column almost at a right angle. Labellum standing at the back of the flower, gibbous at the base and slightly saccate, very small, attached to the extreme point of the foot of the column, slightly tinged with pink, beerded inside, threelobed at the apex; the lateral lobes linear, parallel, obtuse, that in the middle toothed and minute, or rather wanting, its place being supplied by two little revolute teeth. Column very short. Anther terminal, deciduous, ovate, twocelled. Pollenmasses 2, round 2 lobed at the back, waxy, smooth. Capsule 2 inches long, somewhat cylindrical, pink, curved.

Obs. The 4 lateral leaves of the perianth being inserted at the sides of the much elongated ascending base of the column, almost so that the sepals which are nearest the labellum cover very little of the margins of the petals, which occupy the middle of the column, may be said to be placed all in one line. The very base of the column is terminated by the labellum there only inserted.

Wight Ic. V. (1851.) N. 1741:

Malabar. Tree branches. April. Low herbaceous, hairy, leafless epiphyte, roots flattened, green as if to supply the absence of leaves by performing their functions. Spikes erect, flowers whitish or somewhat cream coloured. Lip curious. Lindley's species? Larger figure of the plate taken from dried specimens collected by mieself, smaller from a drawing of Mrs. Jerdon, taken from a living plant, gathered J think in Wynoud and on the North W. slopes of the Neilgherries.

II. Foliosi.

A. Pedunculus bracteis ancipitibus bipectinatus.

2. SARCOCHILUS ARACHNITES Rchb. fil. Mss. *Dendrocolla arachnites* Bl. Bijdr. 287. *Aërides arachnites* L. O. 238.

3. SARCOCHILUS PURPURASCENS Rchb. fil. Mss. *Dendrocolla purpurascens* Bl. Bjd. 288. *Aërides purpurascens* L. O. 240.

4. SARCOCHILUS ACUMINATISSIMUS Rchb. fil. Mss. *Dendrocolla acuminatissima* L. O. 240:

5. SARCOCHILUS AURIFER Rchb. fil. Mss. *Dendrobium auriferum* L. O. 33. Lindl. B. Reg. XXX (1844). Misc. 62. p. 59.:

Stem slender, throwing out very long roots from its sides. Leaves oblong lanceolate. Flowers about an inch long, bright yellow, arising from short broad imbricated bracts, which are much longer than the spaces between them. Known only from a drawing in the possession of the Hortic. Society.

6. SARCOCHILUS SERRAEFORMIS Rchb. fil. Mss. *Liparis serraeformis* Lindl. in Wall. Cat. no. 1946. — L. O. 33.

7. SARCOCHILUS COMPRESSUS Rchb. fil. Mss. *Dendrocolla compressa* Bl. Bijd. 289. *Aërides compressum* L. O. 240. De Vriese Illustr. t. 1. f. 5.

8. SARCOCHILUS GRACILENTUS Rchb. fil. Mss. *Dendrocolla gracilenta* Rchb. fil. Bonpl. 1857. 40.

9. SARCOCHILUS LILACINUS Griff. Posth. Pap. Ic. Pl. As. rar. CCCXX. Huc: Rchb fil. in Bonpl. II. 93.:

Orsidice gen. *Dendrocollae* Bl. maxime affine: Polliniis 4. quadrigeminis oblongis in glandula transversa, caudicula lineari nulla. Perigonium inversum, subcarnosum. Sepalum et tepala subaequalia oblonga s. lateralia pedi gynostemii alato adnata. Labellum cum ungue basi angulatum saccatum trilobum per discum lamellatum, ante lobum medium carinatum. Gynostemium brevissimum subinconspicuum utrinque alatum. Androclinium immersum. Anthera bilocularis. Poll. cf. supra. Fovea parva transversa sub androclinio. Suffrutices palustres insignes caulibus gracilentis, foliis amplexicaulibus, pedunculo alato ancipiti, bracteis ancipitibus. *O. lilacina* Rchb. fil. l. c.: labelli lobo medio solide papilloso, crista in lamellas 2 obtusangulas exeunte; foliis ambitu triangulis.

10. SARCOCHILUS AMPLEXICAULIS Rchb. fil. Mss. Huc: *Dendrocolla amplexicaulis* Blume Bijd. 288. *Aërides amplexicaule* L. O. 239. *Orsidice amplexicaulis* Rchb. fil. in Bonpl. II. 93.

Labelli lobo medio multo breviori, quam in antecedenti, crista in carinulas humiles 3—4 excurrente, foliis ambitu oblongis.

B. Pedunculus incrassato teres bracteis planis.

1. SARCOCHILUS TERES Rchb. fil. Mss. *Dendrocolla teres* Bl. Bijdr. 289. *Aërides teres* L. O. 240. Huc: *Pteroceras* Van Hasselt Hassk. Pl. Jav. Rar. p. 128:

Perigonii conniventis foliola libera, exteriora interioribus obovatis subaequalia, labellum vix perigonio longius, unguiculatum ecalcaratum, limbo convexo connivente basi alis binis erectis linearibus columnam amplectentibus, anthera apici columnae cucullato inclusa, pollinia 4, caudicula nulla.

Pteroceras radicans Hassk. Cat. H. B. 48:

Pseudo parasitica caulescens, radicans, radicibus aëreis albidis, elongatis flexuosis, foliis ovato oblongis aut oblongis apice inaequalibus, 3''' longis, 3—4'' latis, inflorescentia elongato racemosa, pedunculo longissime cylindraceo, 3—4 unciali, bracteato, inter bracteas scrobiculato, bracteis imbricato adpressis parvis rotundatis carnosis, pedicellis 3—5''' longis teretibus patentibus flavescentibus, perigonio extus stramineo intus punctis sanguineis notato; labello infra stramineo ad margines conniventes albido-roseo, alis stramineis purpureo punctatis, apice revoluto atropurpureo. (Haec ad Steud. Mss.)

Ornitharium striatulum Lindl. Paxt. Fl. G. I. p. 188. Xyl. 117:

Ornithochilus striatulus St. Calcutt.

Caulescens, foliis distichis. Flores spicati, resupinati, clausi, carnosi. Sepala lateralia basi ima connata, cum labello parallela, dorsale paulo sejunctum. Petala conformia. Labellum liberum, unguiculatum, carnosum, a basi sagittata cuniculatum. Columna semiteres, brevis, stigmate verticali. Pollinia 2, solida, caudicula obovata, glandula triangulari, rostello reflexo.

Sepala et petala obtusa, carnosa, lutea, maculis quibusdam internis. Labellum spongiosum, candidum, oblongum, rugosum, minutissime scabrum, apice appendice sphaerico cavo atropurpureo aucto, intra cuniculum leve.

Flowers as large as of Odontoglossum Egertonianum. Lip white with a few violet stains and a deep purple round knob at the end. Sent by Dr. M'Clelland of B. G. Calcutta. Habit of Camarotis atropurpurea. Leaves flat, fleshy, pale green, notched

at the end, five inches long, 1¼ broad, 6" high. After one flower-spike has grown eight or ten inches, another pushes from the under side of it, so that it produces two spikes from the same point. I have never seen it before. Certainly no [Ornithochilus, whether that genus may be retained, or merged to Aërides. From Arrhynchium, Camarotis and the like its simple pollenmasses and unguiculate lip clearly separate it. It can be no Micropera because of its unguiculate lip, short rostel and nor do we find among the species to Saccolabium anything, that approaches it at all.

12. SARCOCHILUS RHOPALORRACHIS Rchb. fil. Mss. *Deudrocolla rhopalorrhachis* Rchb. fil. Bonpl. 1857. 40.

13. SARCOCHILUS EMARGINATUS Rchb. fil. Mss. *Dendrocolla emarginata* Bl. Bidjr. 290. *Aërides emarginatum* L. O. 241.

14. SARCOCHILUS PUSILLUS Rchb. fil. Mss, *Dendrocolla pusilla* Bl. Bjdr. 289. *Aërides pusillum* L. O. 241.

15. SARCOCHILUS PALLIDUS Rchb. fil. Mss. *Dendrocolla pallida* Bl. Bjdr. 290. *Aërides pallidum* L. O. 241.

16. SARCOCHILUS SPURIUS Rchb. fil. Mss. *Dendrocolla spuria* Bl. Bijdr. 290. *Aërides spurium* L. O. 241.

17. SARCOCHILUS MINIMUS Rchb. fil. Mss. *Dendrocolla minima* Bl. Bijdr. 290. *Aërides minimum* L. O. 241.

18. SARCOCHILUS ANGUSTIFOLIUS Rchb. fil. Mss. *Dendrocolla angustifolia* Bl. Bijdr. 291. *Aërides angustifolium* L. O. 241.

19. SARCOCHILUS SUBULATUS Rchb. fil. Mss. *Dendrocolla subulata* Bl. Bijdr. 291. *Aërides subulatum* L. O. 242.

20. SARCOCHILUS HYSTRIX Rchb. fil. Mss. *Dendrocolla hystrix* Bl. Bijdr. 291. *Aërides hystrix* L. O. 242.

21. SARCOCHILUS ANCEPS Rchb. fil. Mss. *Dendrocolla anceps* Bl. Bijdr. 292. *Aërides anceps* L. O. 242.

22. SARCOCHILUS ZOLLINGERI Rchb. fil. Mss. *Dendrocolla Zollingeri* Rchb. fil. Bonpl. 1857. p. 40.

23. SARCOCHILUS FALCATUS RBr Prodr. 332. Hook. Journ. Bot. III. 1841. 289. In flower 2 Decb. Tomah Austr. All. Cunningham.

Bot. Reg. XXII. 186. 18332:
Flores albi, labellum intus purpureo striato.

24. SARCOCHILUS OBTUSUS Rchb. fil. Mss. Huc: *Dendrocolla obtusa* Bl. Bijdr. 286. *Aërides obtusum* Lindl. O. 239.

25. SARCOCHILUS TRIDENTATUS Rchb. fil. Mss. Huc: *Cleisostoma tridentata* Lindl. B. Reg. XXIV. 1838. Misc. 46:

Foliis lineari lanceolatis subcarinatis apice oblique tridentatis, racemis horizontalibus paucifloris foliis brevioribus, sepalis lineari-oblongis rectiusculis, petalis linearibus falcatis, labello trilobo intus pubescente lacinia intermedia obsoleta obtusa, lateralibus ovatis acuminatis marginibus involutis, dente calcaris obtuso inflexo hirsuto, calcare pendulo, apice obtuso subventricoso.

Smallflowered epiphyte of no beauty, with the habit of a Saccolabium. It is a native of New Holland, from whence it was obtained by Loddiges. Flowers very small of a dull, dirty, reddish white, mixed with a little yellow. Pollenmasses are remarkable for having each a concave membrane, in the form of a watch glass, adhering

to them at the back. These undoubtedly are the back valves of the anther case, separate all round and adhere slightly to the apex of the caudicula, below the pollen masses.

26. SARCOCHILUS CROCEUS Lindl. B. Reg. 1846. t. 19. adn. Cf. Walp. Ann. III. 781.

27. SARCOCHILUS FUSCOLUTEUS Lindl. Bot. Reg. 1847. t. 18. adn. cf. Walp. Ann. l. c. (Num vere Sarcochilus ?)

28. SARCOCHILUS CALCEOLUS Lindl. Bot. Reg. 1846. t. 19. Cf. Walp. Ann. l. c.

29. SARCOCHILUS UNGUICULATUS Lindl. Bot. Reg. XXVI. 1840. Misc. 140:

Racemo 3—4 floro, labelli unguiculati trilobi ungue convexo lineari linea media exarata, lamina cava, lobis lateralibus semi-ovatis obtusis, intermedio supra trinervi subtus globoso apice papillaeformi.

A native of Manilla, where it was discovered by Mr. Cuming. The flowers are which light straw colour, the side lobes of the labellum white streaked with crimson, and the middle lobe rounded, fleshy, and dotted with crimson. It is a pretty species. Bateman imp.

30. SARCOCHILUS OLIVACEUS Lindl. Bot. Reg. XXV. 1839. Misc. 27:

Foliis oblongis membranaceis falcatis apice acutis integris, racemo flexuoso angulato 4 — 5 floro nutante, sepalis lineari obovatis obtusis, intermedio latiore petalisque conformibus minoribus columnae dorso adnatis, labelli cum columna producta articulati lobo medio minimo transverso rotundato lateralibus acuminatis; disco callis variis crassis rotundatis tuberculato

New-Holland. Imp. by Loddiges. It is very nearly the same as S. parviflorus from which it principally differs in its leaves being broader and not emarginate at the point. The flowers are small and yellowish orange green.

31. SARCOCHILUS PARVIFLORUS Lindl. Bot. Reg. XXIV. 1838. Misc. 50:

Foliis oblongis undulatis chartaceis, apice acute et oblique bidentatis, racemis nutantibus quadrifloris, sepalis lineari-obovatis acutis, lateralibus basi dilatatis, petalis falcatis obtusis, labelli cum columna articulati lobo medio minimo transverso rotundato, disco callis variis crassis rotundatis tuberculato.

A small flowered epiphyte introduced from New-Holland by Mrs. Loddiges. It has no claim to beauty, but is interesting as a second species of the genus Sarcochilus. The flowers are green. with a few spots of dull purple in the sepals. The labellum is less green, beneath indeed almost white, banded with dull purple; articulated with the column, and covered over in the inside with various crowded tubercles, of which the 3 largest form a crescent next the apex of the lip.

32. SARCOCHILUS PICTUS Rchb. fil. Mss. Huc: *Gunnia picta* Lindl. Bot. Reg. XXIV. 1838. Misc. 77:

Labelli lobo intermedio minuto dentiformi, lateralibus oblongis dimidiatis rotundatis sacco cornuto puberulo aequalibus; disco utrinque bidentato, basi bidenticulato.

Little plant from the neighbourhood of Sidney by Mrs. Loddiges. It has small dingy purple flowers, with a white labellum, neatly streaked with purple. It differs from Gunnia australis in the flowers being much smaller, with a very dissimilar labellum.

33. SARCOCHILUS AUSTRALIS Rchb. fil. Mss. Huc: *Gunnia* Lindl. Bot. Reg. XX. 1835. sub 1699:

Perianthium ringens. Sepala herbacea, lateralia postica, subfalcata, erecta, ungui labelli lineari longe producto adnata. Petala herbacea,

sublanceolata, obtusa, ab ungue columnae omnino libera, cum sepalo altero distincto pendulo parallela. Labellum carnosum, ungue longe producto lineari erecto, cum basi columnae continuum, trilobum, antice cornutum, mucrone inflexo, disco tuberculatum. Columna nana, semiteres, aptera, pollinia 4, in paribus globosis coadunata; retinaculo lineari. Rostellum bifidum.

Herba epiphyta; radicibus longis tortuosis supra fruticum ramos repetentibus. Folia lanceolata, falcata, disticha, basi articulata. Racemus simplex, strictus, foliorum longitudine.

Gunnia australis Lindl. l. c.:

Hab. in Insula Van Diemen, in sinu Emu: Backhouse (hab. s. spec. com. cel. Gun.). Tota planta vix 2 pollices excedens. Sepala et petala luteo-viridia. Labellum verosimiliter album, vel leviter rubescens, lobis lateralibus oblongis obtusis; tuberculis 4, luteis, quorum 2 exteriores majores.

Huc monente ipso ill. auct. Fragm. phyt. Austral. I. p. 243: *Sarcochilus Barkleyanus* F. Müll.

34. SARCOCHILUS ADVERSUS Hook. fil. Bot. of New Zealand 241:

Caule brevissimo, foliis linearioblongis obtusis, racemis multifloris, floribus minimis, sepalis petalisque late oblongis obtusis, labello concavo, disco lineis incrassatis aucto apice calloso. Epidendrum adversum. Banks et Sol. Mss. et Ic.

S. parviflorus is a short stemmed herb, with very long fibrons aërial roots, running along the trunks of trees. Leaves three to five, distichous, shortly sheathing at the base, coriaceous, linear oblong, blunt, 1½—2½ inches long. Flowers very small, fleshy, rather crowded in axillary pedunculate racemes, which are shorter, than the leaves, white purple. Bracteae membraneous, shorter than the germen. Sepals broadly oblong, blunt, lower broadest, united below to the base of the lip. Petals smaller, oblong, blunt. Lip continuous with the base of column, very thick and fleshy, orbicular, very concave, margins recurved, blunt, with a thick, lobed callus at the lower end; disk concave, with thickened ridges. Column short. Anther two-celled. Pollens four, waxy, globular, closely united in pairs, seated on a flat broad caudicle, which is fixed by a broad gland to the stigma.

Northern Island. Opuragi. Banks and Solander. Bay of Islands and Wairarapa. Edgerley, Colenso.

Obs. Sarcochili parviflori nomine ill. Hook. fil. plantam primum salutasse ex herbario Lindleyano intellexi. Jam lapsu quodam nomen in descriptione in Fl. Nov. Zel. remansit.

1406. TRIGONIDIUM *Lindl.*

Bot. Reg. 1837. XXIII. 1923.

Sepala aequalia, semiherbacea, in cyathum trigonum isocelem cohaerentia, apice patula, petala corollina, duplo minora, venosa. Labellum nanum, trilobum, cum columna articulatum, medio carnosum. Columna nana, libera, semiteres, anthera unilocularis, pollinia 4, cohaerentia, minoribus dorsalibus, in glandulam triangularem, stigma parvum triangulare tegentem insidentia. Herbae epiphytae americanae rhizomate repente florifero et pseudobulbifero. Folia coriacea. Pedunculi erecti uniflori vaginati.

A. Perigonium externum cyathiformi connivens.

1. TRIGONIDUM LATIFOLIUM Lindl. Bot. Reg. 1837. XXIII. 1923:

Foliis obovato-oblongis, vaginis acuminatis suprema ovario longiore, sepalis lanceolatis acutiusculis, petalis acutis, (labello dorso nudo?), anthera glabra,

Epidendre à chainons. Descourtilz Brazil. drawings Nr. 33.

On the trees, that surround the foot of the mountain of La Bucanha and on the borders of the Parahyba, below the town of Regunde. Jan. Descourtilz.

2. TRIGONIDIUM EGERTONIANUM Batem. in litt. Lindl. Bot. Reg. XXIV. 1838. Misc. 138:

Pseudobulbis ovalibus compressis sulcatis diphyllis aggregatis, foliis ensiformibus pedunculis subaequalibus vel brevioribus, sepalis ovali-lanceolatis acutis (lateralibus reflexis), petalis lineari-lanceolatis acutiusculis apice callosis, labello trilobo medio calloso petalis triplo breviore.

„A native of the Bay of Dulce in Honduras, where it was discovered by G. U. Skinner Esq., to whom I am indebted for its possession. It is a very distinct species of a most singular genus, and I have therefore not hesitated to name it after Sir P. de Grey Egerton Bart. It approaches nearest to T. obtusum, from which its acute petals and narrow leaves (frequently fully a foot and a half long) and clustered pseudobulbs abundantly distinguish it. Its flowers are of a pale liver-colour, dashed and veined with brown and from a resemblance with they have supposed to bear a „Dragon's mouth" the plant has received that appellation from the inhabitants of Honduras. It is of the easiest cultivation."

3. TRIGONIDIUM OBTUSUM Lindl. Bot. Reg. XXIII. 1837. 1923:

Foliis lineari-lanceolatis, vaginis acutis, sepalis obovatis, petalis obtusis, labello dorso tuberculato, anthera glanduloso-pilosa.

Anthera glandulis piliformibus cristata. Sepala rubido luteola. Petala alba, roseo venosa, apice brunnea. Labellum album. Lobi laterales margine rubri, medius lobus antice flavus. Demerara Colley.

4. TRIGONIDIUM SEEMANNI Rchb. fil. in Seemann Herald. Bot. 214:

Pedunculo prope pedali subflexuoso pluri (7) vaginato, vaginis arctis apicibus in basibus superioribus imbricantibus, sepalo summo a basi ligulato cuneato, dimidio superiori abrupte ovali acuto, sepalis lateralibus cuneato oblongis acutis, apice reflexis, tepalis ligulatis acutis, basi attenuatis, apice (ex lateribus involutis) cucullato incrassatis, quam sepala dimidio brevioribus, quintam illorum latitudinis partem aequantibus, labello ligulato trilobato, lobo medio subcordato acutiusculo, per totam paginam callosulo, lateribus suis posticis incisuras loborum lateralium tegente, lobis lateralibus retusissimis incisuras illis minutis efformatis, nervis labelli mediis longitudinaliter carinulato incrassatis, gynostemio postice apice acuto, anthera....

Sepalo supremo, tepalis ac labello recedit ab affinibus T. obtuso Lindl. ac T. Egertoniano Bat. Hujus tamen descriptio valde manca. Rara videtur, cum inter copiam Orchidearum centro-americanam, quam teneo, haud amplius occurrat. Panama 539.

5. TRIGONIDIUM SPATULATUM Lind, Rchb. fil. Bpl. II. 380:

Affine T. Seemanni tepalis apice in disco callosis, labelli callo per loborum lateralium medium lineari apice dilatato retuso, disco lobi medii carnoso.

Pseudobulbus ovatus anceps. Folium late ligulatum octopollicare. Pedunculus spithamaeus tenuis Trigonidii acuminati. Sepalum impar a basi ligulata ovatum acutum. Sepala lateralia oblongolanceolata acuta. Tepala tres quintas illorum longa lanceolata acuta sub apice in disco carnosa. Labellum angustum tepalorum dimidio aequale ligulatum, concavum, apice utrinque angulatum trilobum, lobus medius transversus semiovatus acutiusculus, apice reflexus. — Blätter so gross, wie die des Tri-

gonidium obtusum. — Neu-Granada: Provinz Rio Hacha: im Gebirge. Schlim. — Das uns unbekannte Trigonidium Egertonianum Bat. hat sehr lange schmale Blätter.

6. TRIGONIDIUM ACUMINATUM Bateman in litt. Lindl. Bot. Reg. XXIV. 1838. Misc. 136:

Pseudobulbis ovatis acutis sulcatis monophyllis, foliis linearibus pedunculis longioribus, sepalis acuminatis apicibus recurvis, petalis ovali-lanceolatis mucronatis, labello trilobo petalis duplo breviore. J. Bat.

„Found in Demerara by M. Colley and other collectors. It is a small though interesting species. The flowers are of a dull straw-colour externally but are most elegantly pencilled on the inside with a rich brown. The petals in this, as in all the other species, have each a dark-coloured callosity at their apex, which is placed in such a manner near the entrance of the triangular cup, which the sepals form, that the appearance of a pair of eyes peeping out is produced." J. B.

7. TRIGONIDIUM TENUE Lodd. cat. no. 582. Bot. Reg. 1839. XXV. Misc. 59:

Pseudobulbis ovalibus compressis monophyllis, folio ensiformi acutissimo scapo erecto tenui longiore, sepalis reflexis acuminatissimis, labello oblongo obtuso trilobo glabro apice reflexo medio appendice plano obovato emarginato adnato aucto.

A brownish purple species with a slender habit introduced from Demerara by Mers. Lodd, with whom it flowered.

b. Perigonium externum bilabiatum.

8. TRIGONIDIUM RINGENS Lindl. Bot. Reg. XXVI. 1840. Misc. 122:

Pseudobulbis compressis subrotundis, foliis oblongis recurvis coriaceis nitidis, scapo filiformi stricto distanter vaginato foliorum longitudine, perianthio bilabiato, sepalo postico arcuato petalisque oblongis margine revolutis labium superius lateralibus oblongis apice obtuse carinatis inferius formantibus, labelli trilobi nani ciliati pubescentis lobis lateralibus dentiformibus, intermedio revoluto in medio lucido basi callo reniformi antice obsolete tridentato aucto, columna pubescente.

Forms dense patches of fine vigorous deep green pseudobulbs and leaves promising something much better, than the little insignificant scentless yellowish-green flower, which they produce. The latter stands singly at the end of a very slender erect scape, and distinctly divided into two lips. The labellum is very finely downy, ciliated at the edges and slightly bearded along four of the veins near its base on the upperside. The column is moreover downy, and has a small collection of minute shining hairs near its base. Introduced from Mexico by Hartweg, but had been previously discovered in shady places in the Barranca de Tioselo by Schiede whose Mss. descript together with a specimen has been obligingly comm. me by Prof. Schlechtendahl and is here subjoined.

Cf. Walp. Ann. III. 541. Cf. Lindl. in Paxt. Fl. G. III. p. 61. Gleaning 588.

1406/1. AGANISIA *Lindl.*

Bot. Reg: XXV. Misc. 65. p. 45.

Perianthium patens, aequale; sepalis lateralibus haud basi productis. Labellum liberum, mobile, indivisum, hypochilio parvo concavo, ab epichilio crista transversa glandulosa diviso. Columna erecta, semiteres, marginata, apice utrinque brachio acuto patulo aucta. Anthera cristata. Rostellum elongatum. Pollinia 4, per paria connata, caudicula lineari, glandula parva ovali. — Rhizoma repens. Pseudobulbosa. Pseudobulbi monophylli. Racemus erectus, radicalis, foliis brevior.

1. AGANISIA PULCHELLA Lindl. l. c. — Bot. Reg. XXVI. 1840. tab. 32:

Rhizoma repens, pennae anserinae crassitie, squamis vaginantibus arcte vestitum; pseudobulbis parvis acuminatis intra squamas latentibus. Folia solitaria, oblonga, membranacea, 5 costata, in petiolum angustata. Racemi radicales i. e. e squamis pseudobulbos fultientibus erecti, 3—6 flori, foliis breviores. Flores candidi, $1\frac{1}{4}$ unciam lati, sepalis petalisque subaequalibus, ovato oblongis acutis, patulis. Labellum cum columna articulatum; hypochilio concavo sanguineo maculato, epichilio latiore, ovato integro, medio luteo, basi crista lutescente glandulosa ab hypochilio diviso. Columna erecta, basi ne minime quidem producta, semiteres, apice brachiis duobus patentibus incurvis aucta; rostello lineari producto. Pollinia 4, incumbentia nec collateralia ut olim dixi; caudicula lineari membranacea, glandula parva, subrotunda, tenera.

Demerara. Loddiges.

1406½. ACACALLIS *Lindl.*

Folia I. Febr. 19. 1853.

Sepala patentia, petaloidea; lateralibus basi ima levissime producta connatis. Petala subaequalia, basi subobliqua. Labellum unguiculatum, sepalis longius, petaloideum; hypochilio (ungue) lineari, apice saccato, margine lobato; mesochilio brevi e facie sacci, 3-corni; epichilio transverso, basi concavo, juxta mesochilium verticaliter plicato. Columna brevis, subteres, antice marginata, cum labello continua, apice alata; stigma subrotundum, in marginem inferiorem bicallosum, superiore tripartito, laciniis lateralibus brevibus forcipatis, intermedia (rostello) subulata. Pollinia duo, cereacea, (pedicellata, biloba, emaciata, forte casu quodam); caudicula rhombea; glandula parva, subrotunda. Herba epiphyta, Americae tropicae, pseudobulbosa. Folia nervosa. Racemi erecti, pauciflori. Flores speciosi.

Allied to Huntleya, Warrea etc., but clearly distinguished by its long narrow hypochil, with a deep bag at the point, surrounded by a five-lobed reflexed border, and furnished in front with three projecting processes arising from the very base of the mesochil at its junction with the hypochil and just above the concave ribbed base of epichil. Mr. H. G. Reichenbach's Paradisanthus, with which I am unacquainted, would seem to be also a genus related to this

1. ACACALLIS CYANEA Lindl. l. c.:

Sepala et petala subrotunda, apiculata, basi cuneata. Hypochilii saccus margine acute 5-dentato auctus; mesochilii processus recti, subulati; epichilium transversum, subtrilobum, denticulatum, denticulatum basi late cuneatum, concavum, lobo medio minuto acuminato integerrimo, Columnae alae membranaceae; quadratae. Clinandrium dorso cornutum. Anthera membranacea, ecristata.

This is a very fine plant, with the habit of a Maxillaria of the racemose section, and with flowers as large as those of Odontoglossum Pescatorei. Mr. Spruce reports the sepals and petals to be light blue, paler within; the lip light bluish purple with pale veins; back and wings of column streaked with red. He adds, that the blue of the flower is almost perfectly pure. The leaves are three inches broad by fifteen inches long, with much the texture of a Stanhopea; at the base they gradually taper into a furrowed petiole three inches long. The pseudobulb is ovate, and one-leaved. The peduncle, including the close five-flowered raceme, is about a foot long.

Wild in Brazil; Barra of Rio Nigro, on trees by forest streams; Juli 1851; Spruce 1760 (v. s. sp.)

1406/2. PARADISANTHUS *Rchb. fil.*

v. Schld. B. Z. 1852. 930.

Perigonium patulum, carnoso-membranaceum. Phylla externa oblonga acuta, lateralia externa margine medio inferiori obtusangula, omnia ima basi connata, lateralia interna subaequalia angustiora, cum phyllis l. ext. subparallela, labellum cum gynostemio articulatum, trilobum, lobi laterales trianguli erecti, antrorsum falculati, lobus medius ligulatus, subito in laminam subcordiformem expansus; urceolus eboraceus inter lobos labelli laterales accretos erectos quasi immersus, introrsus, saccum in medio labello postice conico elevatum efformans, ostium pentagonum, margine basilari utrinque in lamellam quadratam, obliquam, in margine inferiori externe denticulatam productum; faux oblique descendens papillis puberula; transsectione rectangule perducta obtriangula; gynostemium semiteres, supra medium rectangule antrorsum flexum, supra basin planum antice utrinque angulatum; androclinii limbus obtuse trilobus, rostellum retusum, trilobum; fovea stigmatica elliptica, transversa: anthera depresso-mitrata, obtuse apiculata, dissepimenta obliterata, pollinia depresso-rhombea, hyalina, quaterna, per paria incumbentia, sessilia in glandula transversissime triangula, viscosa.

1. PARADISANTHUS BAHIENSIS Rchb. fil. l. c.:

Blüthe so gross, wie die der *Warrea cyanea*. Ich kann mich keiner lieblichern Orchidee entsinnen. Das reine Milchweiss der Blüthen sticht wunderherrlich ab von den tief carmoisinrothen Querstreifen auf dem Grunde der Hüllblätter, der Säulengrund ist vorn, und an der Seite ebenso gefärbt, während die Mündung des schief eingesetzten, oben offenen Elfenbeintrichters (s. v. v.) die schönsten von violett in lasurblau übergehenden Streifen und Puncte zeigt. Sie stammt von Bahia. (*Warrea bahiensis* Hort.). Dieser Name lässt einen Schluss auf die Tracht zu. — Ich halte diese herrliche Gattung für eine völlig isolirte. — In der so reichen Sammlung des Hrn. Senator Jenisch von Hrn. Kramer cultivirt.

Rchb. fil. Xenia Orch. Tab. 14. p. 30:

Paradisanthus genus Warreis subaffine, Acacallidi propinquum: labelli hypochilium brevissime unguiculatum, hypochilium eboraceum postice saccatum omnino oblique excavatum limbo antrorsum utrinque lamella dentata aucto, epichilium a basi ligulata cordiforme; gynostemium apterum curvum rostello angusto obscure trilobulo; androclinium trilobulum; anthera depresso mitrata postice obtuse apiculata; pollinia depresso pyriformia nunc prope rhombea per paria incumbentia sessilia in lamina latissima humillima triangula. — Mentum subnullum. Planta tenuior ebulbis internodiis brevissimis. Vaginae acutae paucae parvae a radicibus velatis abbreviatis hinc perforatae. Folia lanceolata acuta viridia subglauca gemina. Pedunculus angulato teres apice laxe racemosus purpureus ex axilla vaginae e superioribus — nunc duo. Racemus pro pedunculo sat longus anthesi haud isochronica, floribus primis infimis jam dejectis anthesi florum summorum Bracteae squamiformes brevissimae. Ovaria pedicellata gracilia. Perigonium patulum molle ac carnosulum labelli hypochilio eboraceo; magnitudine prope illius *Warreae cyaneae* Lindl. Sepala oblongo lanceolata acuta, lateralia margine inferiori obtusangula, labelli lineae mediae divaricati. Tepala lineari ligulata acuta basi inferiori obscure obtusangula cum sepalis subparallela. Labellum brevissime unguiculatum, saepius pendulum. Hypochilium postice subsaccatum corpus quadratulum sistit per diametrum alteram foveatum limbo utroque laterali elevatulo antrorsum utrinque lamellato; lamella utraque quadrata obliqua, margine externo dentata. Fovea intus et laminae papillis papulosa. Epichilium a basi ligulata cordiforme. Gynostemium semiteres angulato curvulum; androclinii limbus obtuse trilobus; rostellum obscure sinuato trilobulum; fovea ovalis transversa. Anthera depresso mitrata postice obtusata cum apiculo obtuso, antice acuta; unilocularis. Pol-

linia depresso pyriformia per paria sibi incumbentia, hyalina; sessilia in lamina transversa humillima utrinque acuminata antice medio acutangula. Perigonium lacteum vittis quibusdam purpureis pone basin internam extus etiam lucentibus more Odontoglossorum nonnullorum (e. g. Cervantesii La Ll. Lex.). Labellum aequaliter lacteum fovea tamen et lamellis praepositis lazulino punctulatis et striolatis. Gynostemium lacteum basi purpureum.

1407. MAXILLARIA *Ruiz Pavon.*

Fl. Peruv. Prodr. 116. t. 25. Syst. 219.

Acaules.

I. Spicatae (Xylobium L. O. 150.)

— Cf. Lindl. in Paxt. Fl. G. III. p. 69. —

1. MAXILLARIA COLLEYI Bat. in litt. Lindl. B. R. XXIV. 1838. Misc. 161:

Pseudobulbis sphaericis, pedunculis radicalibus multifloris, labello postico oblongo apice triangulari obtuso medio bidentato.

This species although no doubt new, is very near M. squalens, from which it differs in the form of the pseudobulbs and labellum. Its dingy flowers have a disagreeable smell, like that of an overripe melon.

Doleo, me plantam eandem iterum alio nomine salutasse, quae non recognoscenda fuit ex longe nimis brevi hac diagnosi. Comparatio cum M. squalenti haud bona.

MAXILLARIA REBELLIS Rchb. fil. in Van Houtt. Fl. des Serres IX. 102:

Foliis magnis oblongis acutis floribus illis M. squalentis plus duplo majoribus carnosis, mento valde producto, sepalo summo oblongo acuto margine undulato, tepalis subaequalibus angustioribus, labello angusto ligulato, apicem versus subdilatato, hinc quasi spatulato, medium versus cristula transversa obsolete tridentata onusto, gynostemio abbreviato, anthera conica mitram phrygicam simulante.

Couleur d'un brun rougeâtre avec des taches brunnes. Labelle d'un pourpre noirâtre.

Rchb. fil. in Bonpl. III. 217:

Nach einem reichen und völlig frischen Exemplar aus dem Garten des Herrn Senator Jenisch, von Herrn Kramer cultivirt, Folgendes: Folium a basi cuneata oblongum acutum nervis tribus valde prominulis, pro folio plicato valde carnosum, subbipedale, medio sexpollicare. Racemus quinqueflorus pendulus, densissimus, subcapitatus. Bracteae cucullatae disco subcarnosulae, ovariis pedicellatis prope pollicaribus atropurpureis longiores, ipsae pallide et lucide purpureae. Flos carnosus illi Maxillariae cucullatae Lindl. subaequalis. Mentum rectangulum magnum. Sepala oblonga obtusata, nunc paulo acuta. Tepala lato ligulata acuta. Labellum ligulatum ante apicem utrinque angulatum apice acutum a basi in medium sulcatum, medio abrupte unidentatum, fossula anteposita, limbo antico sulcato; utrinque vernixium. Gynostemium brevissimum. Anthera gracilis conica, basi anteriori obtuse acuta. Blüthe kupferröthlich mit zahlreichen schwarzpurpurnen Flecken innerseits. Lippe am Grunde beiderseits hellröthlich mit schwarzpurpurnen Flecken, ausserdem völlig schwarzpurpurn und schönglänzend. — Die jungen Triebe durch eine Reihe kurzer stumpfer hübsch zweizeiliger Schuppen ausgezeichnet.

2. MAXILLARIA BRACHYPUS Rchb. fil. in v. Schlchtdl. B. Z. 1852. 731:

Pseudobulbis pyriformibus, folio solitario breve petiolato attenuato, oblongo obovato acuto, maximo, pedunculo brevissimo, basi dense et distiche squamato, superne paucifloro, flexuoso, bracteis ovatis acutis

scariosis maximis ovaria pedicellata abscondentibus; floribus vulgo posticis, perigonii phyllis externis ligulatis acutis, lateralibus internis subaequalibus cuneatis, labello angusto cuneato, dein in laminam ovatam acutiusculam repandulo-undulatam dilatato, lineis 2 elevatis in ungue labelli ceterum laevis. —

Blüthen etwas grösser, als die der *Maxillaria squalens* Hook. Guatemala. Wscwz.

3. MAXILLARIA CORRUGATA Lindl. Bot. Reg. XXX. 1844. Misc. 14:

Pseudobulbis ovatis subimbricatis, foliis lanceolatis solitariis breviter petiolatis, racemis paucifloris petiolo multo longioribus, bracteis minimis, sepalis petalisque obtusiusculis, labello oblongo utrinque emarginato (ideoque obsolete trilobo) ramis elevatis flexuosis corrugato, tuberculo mediano obtuse tricarinato.

Found by Linden between Maracaibo and Bogota and flowered just in Mr. Barkers collection. It has pale brownish purple flowers of no beauty; and a lip with numerous purple elevated zigzag veins on a pale yellow ground. The long tubercle in the middle, which in these plants is usually undivided, or merely 3-lobed at the extremity is here broken up into 3 distinct contiguous elevated ribs.

b. *Wageneri*: tuberculo mediano evanido. Huc:

Maxillaria Wageneri Rchb. fil. in v. Schldl. B. Z. 1852. 734:

Pseudobulbis —, foliis —, pedunculis pendulis paucifloris, bracteis lanceis acutis ovariorum pedicellatorum partem tertiam vix aequantibus, perigonii conniventis phyllis oblongis acutiusculis subaequalibus, labello unguiculato oblongo subpandurato, margine anteriori denticulato, venis omnibus antice lacinulas dentiformes gerentibus.

Blüthen braungelb. Caracas. Wagener.

Id. Bonpl. II. 17: Merida. Wagener l. c. II. 26: vaginae juniores atropurpureo punctatae. L. c. III. 67. Ocanna. Wagener!

4. MAXILLARIA ELONGATA Lindl. Paxt. Fl. G. III. p. 69. c. Xyl. 264:

Pseudobulbis cylindraceis elongatis diphyllis, foliis lanceolatis 3costatis circiter duplo longioribns, scapo erecto bivaginato, racemo denso oblongo, pseudobulbis aequali, bracteis setaceis ovario longioribus, sepalis petalisque linearibus acuminatis, labello ovato-oblongo carnosissimo utrinque lobato utraque facie dense verrucosa ad medium hypochilium usque.

Pallid flowers as large as these of Maxillaria supina with a purplish brown lip, singularly studded within and without with well defined distinct warts, combined with a short close raceme, and almost cylindrical pseudobulbs, tall, six inches long, mark this new species of Maxillaria clearly. The only species like it in the pseudobulbs is M. pallidiflora, a one leaved plant, with a different lip.

4. MAXILLARIA SCABRILINGUIS Lindl. Bot. Reg. XXX. 1844. Misc. 66. (*Cyrtopera scabrilinguis* LO. Nr. 3):

Pseudobulbis ovatis elongatis sulcatis, foliis basi angustatis scapo erecto multifloro longioribus, bracteis acutissimis ovario brevioribus, sepalis petalisque linearioblongis acutis lateralibus falcatis, labelli trilobi lobis lateralibus rotundatis, intermedio ovato carnosissimo subtereti obtuso longiore, utraque facie papillis densissimis versus callum oblongum tricostatum decrescentibus obsita, anthera pubescente.

By an error resulting from the examination of insufficient specimens, this plant, which is nearly allied to M. squalens, was referred to Cyrtopera in the „Gen. and Spec. of Orchid. Pl.“ It is a native of the neighbourhood of Loxa, where Mr. Hartweg found it, and has flowered in the Garden of Hortic. Soc. The flowers are dull

purplish yellow. The labellum is remarkable for having all its end, inside and out, covered over with stiff short tubercules, terminated by a purple stain.

Lindl. Orchid. Lind. p. 19. 1846. Nr. 99:

An epiphyte and also growing on rocks, in Merida 5000'. Juni. Petals white, yellow. Nr. 99.

Rchb. fil. Bpl. II. 17:

Die Beschreibung der Lippenspitze ist falsch. Sie ist nicht stielrund, sondern strotzt von aufsitzenden Lamellen, die ihr ein stielrundes Ansehen geben. Pavons Exemplare stimmen völlig; auch Funck und Schlim sammelten sie.

Hue: *Dendrobium carnosum* Presl ex Lindl. l. c.

6. MAXILLARIA STACHYOBIORUM Rchb. fil. in v. Schl. B. Z. 673:

Pseudobulbis —, foliis oblongis petiolato attenuatis, acutis; pedunculis basi 2—3 laxe-vaginatis, multifloris, folia subaequantibus, bracteis lineari-lanceis cuspidatis, ovaria pedicellata aequantibus, seu superantibus, floribus vulgo posticis in mentum valde cornutum productis, perigonii phyllis lanceolatis acutis, labello anguste ligulato elongato, imo apice trilobo, lobis lateralibus obtusatis, medio orbiculari plano, venis 5 centralibus elevatis.

Blüthen nur halb so gross, als die der merkwürdigen *M. elongata* Lindl. Die Art selbst nächst *M. bractescens* Lindl. Diese hat wenig grössere Blüthen, kurzes Kinn, sehr lange Deckblätter. Chiriqui. —

7. MAXILLARIA LEONTOGLOSSA Rchb. fil. Bonpl. III. 67:

aff. Maxillariae squalenti: bracteis squamaeformibus minutissimis, mento valde obtuso, floribus duplo majoribus, labelli trilobi lobis lateralibus obtusangulis, lobo medio lato semiovato utrinque papulis scaberrimo, carinis ternis a basi in medium. — Adest pedunculus crassus superne racemosus. Sepala oblonga acuta, lateralia valde carinata. Tepala cuneato-ligulata acuta subbreviora. Labellum adhuc brevius, lobo medio valde incrassato. Gynostemium crassum humillimum. Rostellum semilunari exsectum.

Blüthen gelb mit rothen Punkten. März. 6000'. Erdorchidee. Ocanna. Wagener.

8. MAXILLARIA TRUXILLENSIS Rchb. fil. Bonpl. II. 17:

Pseudobulbis oblongis apice angustatis, pedunculo spithamaeo, basi ampla vaginato, apice compacte racemoso, bracteis spathaceis acutis ovaria pedicellata subaequantibus, floribus posticis, mento maximo rectangulo, sepalis tepalisque triangulolanceolatis acutis, labello quarta tertiave parte breviore, oblongo, medio obtuse trilobo, lobo medio ligulato, utrinque densissime papilligero,, hinc quasi teretiusculo, carina a basi usque in discum quadrisulcata venulis quibusdam in apice loborum lateralium papuligeris.

Nächst M. squalens, hat kürzere Pseudobulben, grössere weisse Blüthen mit purpurfleckiger, längerer Lippe, grössere scheidige Deckblätter. — Von M. bractescens unterscheidet sie sich durch kürzere Deckbläuer, dichte, kurze Inflorescenz; von M. scabrilinguis durch Farbe, dichte Inflorescenz, grosses Kinn, kleinere, stumpfere Seitenlappen der Lippe. Truxillo. Wagener.

9. MAXILLARIA BRACTESCENS Lindl. Bot. Reg. XXVIII. 1842. Misc. 92:

Pseudobulbis conicis elongatis sulcatis, foliis latis plicatis, scapo trivaginato, racemo elongato paucifloro, bracteis linearibus acuminatis scariosis floribus longioribus, sepalis oblongo-lanceolatis margine revolutis, petalis conformibus minoribus, cornu brevi rotundato, labello trilobo

apice recurvo obtuso venis omnibus elevatis sinuosis rugosis, callo elevato rugoso apice subtrilobo.

Habit of Maxillaria squalens. The flowers are twice as large, from an inch to 1½", of dull yellow, with a reddish brown lip. The scape bears 5—6 flowers and is ½ high. The very long and curious narrow bracts readily distinguish it. Sent to the Hort Soc. from Loxa by Mr. Hartweg. Art. 42.

10. MAXILLARIA SQUALENS Hook. B. M. N. S. III. 1829. 2955: Rchb. fil. Bonpl. II. 17. (*M. supina* Endl. Pöpp.). Caracas. 4500'. Wagener. Juni—August. Gemein.

11. MAXILLARIA DECOLOR Lindl. Bot. Reg. 1549:

Pseudobulbis oblongis compressis, foliis solitariis oblongo-lanceolatis plicatis utrinque acuminatis, scapo radicali multifloro vaginato foliis breviore, sepalis ovato-oblongis obtusis patentibus, petalis duplo minoribus conniventibus, labello postico obsolete trilobo obtuso cucullato, callis 5 elevatis parallelis aequilongis ultra medium procurrentibus.

B. Mag. 3984: Jamaica. Febr. Glasgow vere 1840. Perig. sulphureum, labello albido. Huc ex Lindl. et Paxt. Fl. G. I. c.: *Dendrobium palmifolium* Sw. *Maxillaria palmifolia* Lindl.

12. MAXILLARIA PALLIDIFLORA Hook. B. M. 2806. Huc: *Maxillaria (Xylobium) sulfurina* Ch. Lem. in V. Houtt. IV. 3306. ex Rchb. in v. Schl. B. Z. 1852. 887. cf. Walp. Ann. III. 542.

Rchb. fil. Bpl. II. 17. Caracas. 5000'. Nov. Wagener.

Huc: *Maxillaria (Xylobium) stenobulbon* Klotzsch Mss. Sem. H. Berol. 1853:

Pseudobulbis dense aggregatis cylindricis elongatis leviter striatis, apice in petiolum basi articulatum attenuatis; foliis oblongis acuminatis coriaceis glabris nitidis tricostatis arcuato-recurvis, in petiolum antice sulcatum attenuatis; racemis basilaribus erectis 3—7floris; pedunculis versus basin vaginis tribus viridifuscentibus membranaceis amplexicaulibus brevi acutis, infra apicem ampullaceis instructis; floribus pedicellatis, bractea longa lanceolata acuminata subdiaphana nervosa suffultis; perigonii foliolis pallide sulphureis unicostatis, exterioribus ima basi connatis, semipatentibus, margine recurvis, acutis, supremo recto lanceolato subito acuto, inferioribus late falcatis, basi in gibbum productis; interioribus late lanceolatis obtusis conniventibus parum brevioribus; labello postico albido obsolete trilobo, superne reflexo, apice subemarginato-truncato, basi cum pede gynostemii aurantiaco, callis quinque elevatis parallelis aequilongis, ultra medium corrugatis, margine recurvo-crenulatis instructo.

Pseudobulbi stricti, 6—7 pollices longi et pennae anserinae crassitudine. Folia 8—10 pollices longa, 1½—2 pollices lata. Petiolus 1—1½ pollicem longus. Racemi 6—7 pollices longi crassitudine pennae corvinae. Vaginae tot quot articulationes in pedunculo, plerumque tres, rarissime quatuor, dimidium pollicem longae, in inferiore parte scapo arcte appressae et in superiore parte inflatae. Bracteae 7 lineas longae, sesquilineam latae. Pedicelli 4 lineas longi. Germen triquetrum, acute angulatum, 5 lineas longum. Foliolum perigonii exterioris supremum 7 lineas longum, basi 2½ lineas latum, inferiora 8 lineas longa, ad basin 4 lineas lata. Foliola interiora 6 lineas longa, versus basin 2 lineas lata. Labellum 6 longum, 3½ lineas latum. Venezuela. Wagener. Floruit M. Octob. 1853 in horto Berolinensi.

13. MAXILLARIA FOVEATA Lindl. Bot. Reg. XXV. 1839:

Foliis lanceolatis undulatis plicatis racemo triplo longioribus, bracteis linearibus sphacelatis ovario longioribus, sepalis petalisque lineari-ob-

longis obtusiusculis, labello postico oblongo apice trilobo; lacinia media rotundata carnosa excavata, disco ter aut quinquies sulcato.

Demerara, Loddiges. Near M. squalens, but the lip is different. The flowers are of a pale uniform straw colour. Faint, not unpleasant smell.

Rchb. fil. Bonpl. II. 17. Caracas. Wagener.

14. MAXILLARIA CONCAVA Lindl. Bot. Reg. 1844. XXX. Misc. 102:

Acaulis, racemosa, pseudobulbis oblongis alte sulcatis, foliis geminis tricostatis nitidis in petiolum angustatis, bracteis setaceis, sepalis lateralibus falcatis acuminatis sub apice carinatis petalis duplo minoribus, obtusis apice plano convexis, labello oblongo obsolete trilobo apice carnoso concavo rotundato extus scabriusculo, tuberculo lineari apice obtuse tridentato.

At first sight this species might be mistaken for bracteascens, but its flowers are smaller; the bracts very small and setaceous, and the lip of quite another form. It has little beauty. and was found in Guatemala by Mr. Hartweg, by whom it was sent to the Hort. Soc. 1841.

Paxt. Fl. G. II. p. 58. Nr. 312. c. ic. xyl.:

Flowers pale yellow. Lip almost truncate, concave, bluntly 3 toothed, with the middle lobe somewhat fleshy and tuberculated at the edge; marked with rose colour veins, with a long narrow ridge in the middle, threelobed at the point. It is nearest M. bracteata, but its flowers are smaller, bracts very small and bristly and lip of quite another form.

15. MAXILLARIA HYACINTHINA Rchb. fil. Cf. Walp. Ann. III. 542. Regel Cat. Hort. Petrop. (*Maxill. affinis* H. Petrop.):

Pseudobulbi oblongi leviter compressi; foliis binis terminalibus coriaceis, oblongo-lanceolatis, acuminatis, vix plicatis, ad 1½ pedem longis, 3—6 pollices latis. Racemus radicalis, spithamaeus, multiflorus; pedunculo vaginis 3—4 membranaceis acutis vestito. Bracteae lineari-subulatae, germen superantes. Flores vix pollicem in diametro, pallido-flavi; sepalis patentibus, ½ pollicem longis, lateralibus lato-lanceolatis acuminatis basi partem inferiorem mentiformem acutam floris formantibus, sepalo superiore lateralibus angustiore; petalis suberectis, sepalis minoribus, lanceolatis, acutiusculis; labello postico, cucullato, petalis paullo breviore, apice obsolete trilobo obtuso, supra callo lineari apice tricrenato lineisque roseis munito.

Flores Hyacinthi odore. *M. concava* Lindl. in Paxt. Fl. Gard. differt tantum pseudobulbis leviter sulcatis bracteisque brevioribus et sine dubio ad hanc speciem pertinet.

Venezuela. Lansberg et Wagener plantas vivas miserunt.

Obs. Cl. Lindley l. c. tres alias affert species.

1) *Maxillaria longifolia* L. O. 150 (*Dendrobium longifolium* Hb. K. N. G. et Sp. I. 360. *Xylobium longifolium* Lindl. B. Reg. 732.) Haec certo *Cyrtopera Woodfordi* Lindl.

2) *Maxillaria latifolia* L. O. 149. (*Dendrobium latifolium* Hb. K. N. Gen. Sp. 360.). Haec certo est *Govenia*.

3) *Maxillaria maculata* L. O. 149. (*Dendrobium maculatum* H. K. N. G. Sp. 359. *Broughtonia maculata* Spreng.). Haec mihi incognita. Sed jam ob pseudobulbos compressos huc non pertinere videtur. — Praeterea l. c. ex Fl. Peruv. huc referuntur: *Maxillaria undulata*, *variegata*, *triphylla*, *hastata*, *cuneiformis*, *bicolor*, *tricolor*.

16. MAXILLARIA COELIA Rchb. fil. v. Warscew. II. 97:

aff. M. squalenti labello trilobo laevi praeter nervos 2 medios aliosque obsoletissime carinatos. Pedunculus abbreviatus, basi amplivaginatus, superne dense racemosus, bracteae lanceo-acuminatae ovaria pedicellata

aequantes, flores inversi, illis M. squalentis majores; mentum porrectum acutangulum magnum; sepalum impar oblongum acutum; sepala lateralia ter latiora, longiora, oblonga deorsum acuta; tepalaineariligulata acutiuscula; labellum a basi flabellatum, utrinque extrorsum curvilineum; apice abrupte trilobum; lobi laterales rectanguli, lobus medius productus latoligulatus, limbo crenulatus, ante basin incrassatus; nervi 2 medii laterales in medio disco subcarinati; omnes reliqui hinc illinc tenuicarinulati; anthera summo vertice carinata. v. Warscewicz.

II. Uniflorae. (Colacastrum Rchb. fil. v. Schl. B. Z. 1852. 857).

— Folia equitantia. —

17. **MAXILLARIA IRIDIFOLIA** Rchb. fil. Bonpl. II. 16:

Foliis distichis equitantibus lanceis acuminatis, ovario incurvo vulgo cum pedunculo angulato, sepalis triangulis, tepalis subaequalibus minoribus, labello ligulato pandurato, nunc paucicrenulato, longitudinaliter tripulvinato. Dicrypta iridifolia Bat.

Wächst bei Cubobas auf Cuba (Pöppig).

Huc: Pleurothallis? Valenzuelana. A. Rich. in Ramon de Sagra Cub. 234.

Ebulbis, acaulis, foliis distichis approximatis, ensiformibus, gladiatis lanceolatis, acutis, basi imbricato-vaginantibus, crassis, glaucescentibus 6—9 uncias longis, 4—6 lineas latis, pedunculis brevioribus, floribus axillaribus, rigidis, bracteis pluribus lanceolatis acutis, tenui-membranaceis obtectis; flore breviter pedicellato, apice pedunculi articulato, deciduo, amplitudine medio, (colore luteo?), sepalo superiore ovali lanceolato acuto, convexo, inferioribus basi productis, lanceolatis, acutis, paulo longioribus; internis (petalis) anguste lanceolatis acutis tenuioribus, et paulo brevioribus, labello basi producta gynostemii articulato erecto, trilobo, angusto; lobis lateralibus longis obtusis parum productis, intermedio crasso, linguaeformi acuto.

Parasitica in cortice arborum, in sylvis insulae Cubae? Oberoniae vultus.

— Folia plana. —

18. **MAXILLARIA ACUMINATA** Lindl. in Benth. Pl. Hartw. 155.

Rchb. fil. in v. Schl. B. Z. 1852. 857:

Acaulis, rhizomate repente radicante, pseudobulbis diphyllis, foliis linearioblongis emarginatis, petiolo pluries longioribus, scapo flexuoso multivaginato foliis longiore, vaginis adpressis internodiorum, longitudine supremis ventricosis ovario longioribus, sepalis linearilanceolatis acuminatis, petalis linearibus acutis, labello obtuso basi bicalloso. Folia 4pollicaria. Sepala pollicaria. Clinandrium piloso glandulosum.

In montibus Loxa.

Rhizomate valido dense vaginato, vaginis triangulis acuminatis, carinatis, pseudobulbis oblongis ancipitibus, obscure costatis, diphyllis, inter se remotis, foliis ligulatis, basi valde attenuatis, apice bilobis, pedunculis flexuosis, dense vaginatis, vaginis ochreatis ancipitibus acutis, mento parvo, perigonii phyllis ligulatis, acutis, subaequalibus, phyllo supremo acuto, labello unguiculato, dilatato, limbo basilari elevato, antice retuso, obscure trilobo, gynostemio gracili, elevato, androclinio minutissime denticulato, rostello retuso, medio paulisper exciso.

Loxa 837. Hartweg!

Huc: *Lycaste acuminata* Rchb. fil. Bonpl. III. 216. (pollinarii causa).

19. **MAXILLARIA ACIANTHA** Rchb. fil. in v. Schl. B. Z. 1852, 858:

Rhizomate densissime vaginato, vaginis punctulatis, pseudobulbis oblongis, angustis, 9—10-costatis nitidis, laevibus, foliis lineari-ligulatis, apice bilobis, geminis in apicibus pseudobulborum, pedunculis rectis aggregatis dense et disticbe et imbricatim vaginatis, vaginis triangulis, carinatis, mento parvo, perigonii phyllis 5 subaequalibus, lanceolatis, acutis, quasi ex ebore confectis (totius hujus societatis 18. 19. 20. more — in siccis), phyllo summo acuto acuminato, labello angustissime rhombeo, limbato, canaliculato, callo a basi medium prope usque canaliculato, gynostemio clavato, rostello introrsum semilunari, exciso, androclinio minute ciliato marginato.

In allen Theilen 2—3 mal grösser, als M. Friedrichsthalii. Blätter nur 1/2" breit, 8—10" lang. Costa Rica. J. de Warscewicz.

Lycaste aciantha Rchb. fil. Bonpl. III. 216. (*Maxillaria aciantha* Rchb. fil.): Pedunculus a bractea et vaginis ancipitibus obtuse acutis vernixiis stipatus. Perigonium prope corneum, aurantiacum, extus pallidius, viridi asperum, intus glutinosum. Sepalum dorsale carinatum, carina apice retuso praerupta. Sepala lateralia acuta. Tepala angustiora, marginibus ante apicem revoluta. Labellum sigmoideum, ligulatum, medio utrinque obtusangulo dilatatum, apice incrassatum, limbatum. Carina glutinosa a basi in discum usque ad genu flexurae ascendentis. Foveola ante apicem marginatum glutinosa. Discus viridulus. Carina aurantiaca. Margo flavus atroviolaceo guttatus. Gynostemium clavatum. Androclinium subperpendiculare; ciliatulo limbosum. Rostellum utrinque decurrens, medio dente triangulo bidentato. Anthera mitrata vertice carinata velutina. Pollinia quaterna linearia liberrima in caudicula lineari cornea. Glandula obtuse rhombea, apice bidentata.

20. **MAXILLARIA FRIEDRICHSTHALII** Rchb. fil. in v. Schld. B. Z. 1852. 858:

Rhizomate valido incurvo, dense vaginato, vaginis abbrevatis, microscopice arpophyllaceis, pseudobulbis oblongis, approximatis, compressis costato 7—8 carinatis, rugis inter costas transversis (an etiam in viva?), apice diphyllis, foliis ligulatis, cuneatis, apice bilobis, foliis suppositis fulltientibus multo brevioribus, pedunculis aggregatis, abbreviatis, rectis seu curvulis, nunquam flexuosis, dense disticbe vaginatis, vaginis ancipitibus, acutis, fusco-maculatis, imbricantibus, perigonio e vagina summa producto, curvulo, mento parvo, perigonii phyllis oblongis acutis, subaequalibus, summo tamen apice carinato, galeato, apice retuso, complicato, labello angustissime rhombeo, canaliculato, obtuso, carinula elongata a basi ad medium, gynostemio clavato, androclinio ciliato, marginato, profundissime angustissimeque exciso, hinc descendenti bilobo supra foveam stigmaticam.

Blätter 3—4 1/2" lang, etwa 1/2" breit. Blüthen etwas kleiner, als bei *M. acuminata* „Huele de noche" vocatur ab gratum, quem noctu spirat odorem." Guatemala. Prov. Chontales, in monte Aragua. Friedrichsthal.

21. **MAXILLARIA ANATOMORUM** Rchb. fil. Schl. Bot. Z. 1852. 935:

Pedunculis erectis, rarius vaginatis, vaginis apice acutis, summa vagina subspathacea, ovarium arcuatum subaequante, alabastro longissime rostrato, horizontali, flore horizontali, mento rectangulo mediocri, phyllo supremo lineari-ligulato acuto, acuminato, phyllis lateralibus externis subaequalibus, apicem versus magis adhuc attenuatis, phyllis lateralibus a basi lata triangulo linearibus acutis, brevioribus, angustioribus, labello medio trilobo, lobis lateralibus obtusangulis subobsoletis, lobo medio producto triangulo subaculo, callo triangulari depresso antrorso; inter lobos laterales, superficie ab illo callo basin usque pilis moniliformibus 3—4 celluliferis, candidis, fragilissimis, secedentibus, amyligeris (!!!!!)

densissime obsitis', hinc furfuraceo, gynostemio semitereti, arcuato, androclinii membrana marginante brevissime denticulata, angulis anticis abbreviatis, introrsis, androclinio proclivi, stigmatis fovea supposita semilunata, curvatura rostellum excisum, muticum versus spectante, anthera depresso-mitrata, sc. basi tantum aperta, apicilata, basi excisa, polliniis depressis clavatis, postice brevioribus, glandula semilunata.

Blüthen blassgelblich, dreimal grösser, als bei *M. crocea*, *chlorantha* u. s. w. Der sogenannte Mehlstaub ist bisher nur bei *M. candida* G. Lodd. (a fine deciduous, mealiness) angegeben. (Diese muss unserer Art äusserst nahe stehen. Sie ist aber kleinblüthig, der Mittellappen der Lippe gezähnelt). Säulenspitze violett.

Rchb. fil. Bpl. II. 15: Lippe gross, weiss mit Mehlstaub. Hüllblätter allmählich ganz fein zugespitzt. Blätter breit länglich, spannenlang, dünn pergamentartig. Caracas.

22. MAXILLARIA HISTIOLOGORUM Rchb. fil. v. Schl. B. Z. 1852. 936:

Pseudobulbis —, foliis oblongo-ligulatis basi cuneatis apice inaequali bilobis, pedunculis aggregatis gracilibus, dense vaginatis, vaginis acutis apice acuto dense imbricantibus, spatha summa apice acuta nunc apiculata, angusta, ovarium excedente, flore adscendente, mento brevi subrectangulo obtusato, perigonii phyllis ligulato-linearibus, acuminatis, l. i. a latiori basi magis attenuatis, subbrevioribns, labello p. ph. ext. quadruplo breviore, angusto, oblongato, medio trilobo, lobis lateralibus prope rectangulis, margine antico hinc dentatis, basi longitudinaliter antice plicatis, lobo medio liguliformi, crasso, viscoso(?) punctulato, elevatione callosa a basi ad medium usque ubi antrorsum triangula, gynostemio semitereti crasso prono antice utrinque alato marginulato, androclinio oblique descendente margine parce prominulo subdenticulato, rostello producto, angulato, introrsum exciso, lateribus trapezoideo paulisper descendente, medio androclinio ac rostello superne carinato, postice nunc unidenticulato, fovea stigmatica oblonga, haud parva, anthera incumbenti depresso-mitrata, apice (postice igitur) apiculato carinulata, uniloculari, polliniis pyriformi-depressis, posticis internis minoribus, glandula semilunata.

Blüthen scheinen weissgelb. Grössenverhältnisse wie bei voriger; Blätter aber viel länger und schmäler. Ueber die Substanz des Mittellappens der Lippe bin ich unklar. Brasilien.

23. MAXILLARIA VENUSTA Lind. Rchb. fil. Bonpl. II. 280:

aff. *M. anatomorum* Rchb. fil: floribus duplo majoribus, sepalis multo latioribus, labelli trilobi lobis lateralibus angulatis, lobo medio triangulo margine revoluto, callo triangulo, in disco ante sinus loborum lateralium, tota superficie furfuracea; rostello obtuse bidentato.

Blüthen gespreizt, die spitz ausgezogenen Hüllblätter auseinander gespannt, schneeweiss. Die Lippe gelb mit rothen Rändern, der Säule angedrückt; Rand des Androclinium fein gezähnelt. — Blatt über fusslang, länglich, spitz, untres Drittheil ganz schmal, stielförmig. Blüthenstiel fusslang. Ocanna. 5—6000'. Januar. Nr. 1153. Schlim. — Pescatorea t. 38.

24. MAXILLARIA ALBATA Lindl. Orchid. Lind. p. 19. N. 102. 1846:

Acaulis, scapigera, foliis oblongis acutis longe petiolatis scapis debilibus, flexuosis pluries longioribus, vaginis linearibus acutis suprema adpressa ovario longiore, sepalis petalisque linearibus, labello trilobo laciniis obtusis lateralibus divaricatis, intermedia oblonga subemarginata callosa, appendice brevissima transversa lamellisque 2 brevibus pone basin.

„An epiphyte, with long compressed oval, blackish pseudobulbs. Flowers and lip pure white, very sweet. Forests of Jaji at the height of 8000 feet. June and July."

N. 1469. Very near Maxillaria splendens, but that species, according to Pöppig, has an yellow lip, of a different form, and a fringed anther bed. Leaves two feet long. Sepals 2 inches long.

Rchb. fl. Bpl. II. 15: Merida 7000'. Januar. Lippe klein, lila. Wagener.

25. MAXILLARIA CANDIDA G. Lodd. in litt. Bot. Reg. XXVII. 1841. Misc. 59:

Pedunculis radicalibus unifloris, sepalis petalisque linearibus acuminatis, labello oblongo obsolete trilobo medio ovato obtuso denticulato.

A little Brazilian plant of small beauty. Flowers are white and about as large as those of Maxillaria ochroleuca. It is distinguished readily by the whole inside of the lip being covered with a fine deciduous mealiness. Flowers at Hackney with Lodd.

26. MAXILLARIA SPLENDENS Pöpp. Endl. N. Gen. et Sp. I. 38. Tab. LXVI:

M. bulbis ovalibus, ancipitibus; foliis linearibus longissimis, basi attenuatis, apice oblique bidentatis; scapis fasciculatis, unifloris; labelli ovalis, apice trilobi lacinia terminali truncata, denticulata; sepalis angustis, acutissimis.

Herba acaulis, perennis, inter congeneres equidem non florum magnitudine sed eorum copia maxime lucens, tum in arborum vetustarum ramis, tum in quisquiliis quibus solum sylvarum primaevarum tegitur reperta, caespites formans ex innumeris bulbis, squamis vaginisque constantes, foliis longissimis nutantibus obumbratos, scapis floridis saepe ultra quinquaginta ornatos. Rhizoma nullum. Radices numerosae, repentes, plurimae simplices, aliae ramulo uno alterove divisae, omnes teretes, subere cinereo argenteo, nitido, glabro tectae, pennae corvinae crassitie, digitum saepe longitudine excedentes. Squamae numerosae, inferiores saepe emarcidae et fibrosae novum plantae substernunt pulvinar, superiores erectae, adpressae, imbricatae, vaginantes interdum distichae, deltoideae, acutae, convexae, intus concavae et laevissimae, coriaceae, rigidae, sulcatae, striatae, glabrae. Bulbi uti in speciebus antea descriptis, nunc centrales monophylli aut nudi, nunc juniores in ambitu stirpis dispositi minus regulares, foliorum basin vaginantem et incrassatam simulantes, secundo vel tertio anno excrescentes, vetustioribus emortuis et in fibras solutis vel ab insectorum larvarumque agminibus devoratis novae progeniei centrum praebent, a succedente tandem generatione excipiendi. Bulbi vetusti centrales ovales, cylindrici, acuti, angulis vix multum elevatis, ancipites, virides, glabri, tres ad quatuor pollices alti, diametro longiore bipollicares, angustiore vix pollicares, vel in vertice nudi vel folium solitarium ferentes. Folia linearia apice oblique obtusata atque breviter bifida, laciniis duabus rotundatis latere interiore interdum mucronatis, a medio inde valde attenuata, inferne ancipitia, plicata, vaginantia, lateralia cum basi dilatata in bulbum mutanda, articulata, omnia plana, multinervia, coriacea, glabra, nitida, laete viridia, apice laxa. Scapi quaterni vel quini, fasciculati, intra sinum vaginarum bulbum circumdantium inferne reconditi, e basi bulbi provenientes, uniflori, erecti, flexuosi, articulati, teretes, bracteati, pedales. Vaginae et bracteae remotae, haud imbricatae, cylindricae, haud multum ventricosae, apice articulum proximum haud attingentes, adpressae. Flores nunc resupinati nunc recti, ob flexuram terminalem scapi saepissime horizontales, pollices duos longi, sepalis angustissimis, nivei, immaculati, labello croceo. Sepala lanceolato linearia, acutissima, angustissima, subaequalia, nervosa membranacea: superiora tria erecta, haud conniventia, supremo parum convexo margine lateralia interiora haud obvelante; infimis processui columnae adnatis, basi breviter saccatis, erectis, parum reflexis nec patulis, reliqua latitudine vix excedentibus. Labellum sepalis triplo brevius cum columnae processu anguloso connatum, ungue angusto, brevi donatum, lamina compresse concava, coriacea, intus nuda, dum vi explicatur ovali postice subtruncata, antice tenuissime denticulata. Columna labelli longitudine curvata, apice crassior, semiteres, antice plana, foveae antherae antice ultra stigma fornicatim prominente, margine posteriore breviter ciliata, stig-

mate marginato. Anthera galeaeformis, lateribus compressis medio concava, intus bilocularis. Pollinis massae quatuor cereaceae, bigeminae, altera majore et exteriore interiorem minorem intra foveam in ipsius facie excavatam recipiente. Caudiculae elastice replicatae duae. Operculum reniformi triangulare, convexum, solum marginem glandulae globosae stigmatis superiorem obtegens.

Crescit inprimis in tractu montium a praedio Pampayaco meridiem versus sito. Floret Februario.

27. MAXILLARIA LONGISSIMA Lindl. Orch. Lind. 1846. Nr. 104. pg. 20:

Acaulis, scapigera, folio oblongo ligulato basi angustato, bractea acuta ovario longiore, sepalis longissime acuminatis, petalis conformibus, minoribus, labello oblongo subrotundo trilobo, laciniis rotundatis, intermedia oblonga, crispis, appendice pilosa apice ovata.

„Epiphyte, with oval flattened pseudobulbs. Flowers deep red. Forests of Merida, at the height of 6000'. Juli. .N 2215. The long narrow strap-shaped sepals are between three and four inches long.

28. MAXILLARIA GRANDIFLORA L. O. 147. Orch. Linden. p. 19:

„An epiphyte, with oval flattened pseudobulbs, petals white as snow, and a powdery yellow lip. Forests of Jaji, in the province of Merida, at the height of 5000 to 7000 feet; August." (Nr. 631.)

Rchb. fil. Bpl. II. 280. Ocanna. Juli. 5000'. Nr. 35. Schlim.

Rchb. fil. Bonpl. III. 67. Ocanna. 6000'. Blüthe weiss. Wagener.

29. MAXILLARIA LUTEO-ALBA Lindl. Orch. Lind. 1846. N. 106. p. 20:

Acaulis, scapigera, foliis oblongis obtusis basi complicatis, scapo sepalis oblongo linearibus, elongatis petalisque obtusis, labello trilobo basi concavo piloso margine undulato, laciniis obtusis intermedia obovata emarginata medio convexa, appendice ovato subcordato concavo.

„An epiphyte, with oval, obtuse compressed pseudobulbs, and a yellow flower spotted with white. Forests of Merida, at the height of 5000—6000'. June and Sept." Nr. 678. Leaves nearly two inches broad; sepals two and a half inches long; and three-eights wide.

Rchb. fil. Bonpl. II. 18. 8000'. December. Wagener. Steht der *M. leptosepala* Hook. in ihren Merkmalen ausserordentlich nahe, nur die Seitenlappen der Lippe bieten einen etwas wesentlichen Anhaltepunkt. Dagegen sind Dimensionen und Farbe himmelweit verschieden und diese Pflanze gehört unter die prächtigsten Maxillarien. Aeusserst nahe steht *M. Batemani* Endl. Pöpp., welche ich noch nicht hinreichend untersucht habe.

Rchb. fil. Bonpl. III. 67. Ocanna. März. 5—6000'. Mit ganz schmalen Sepalen, wo sie höchst verschieden aussieht von der Hauptform. Wagener.

Rchb. fil. in Bonpl. II. 280. Ocanna. 6—7000'. Wälder. Januar. Schlim. N. 401. 402. Mai. Nr. 444. Diese Art ist unendlich wandelbar in der Gestalt ihrer Sepala.

30. MAXILLARIA BATEMANI Pöpp. Endl. Gen. et Sp. I. 38. Tab. LXV:

M. bulbis ovalibus, cylindricis; foliis linearibus, elongatis, basi longe attenuatis, apice bidentatis; scapis solitariis unifloris, labello subrotundo, concavo, apice bilobo, margine undulato, sepalis triplo breviore.

Herba acaulis, perennis; parasitica in arborum juniorum ramis a terra haud multum remotis, florum pulchritudine in sylvis istis densissimis lucens. Rhizoma nullum. Radices plurimae repentes, undique divergentes, ramosae, teretes, uti reliquarum specierum e subere albo, crasso, glabro, filum lignosum, vestiente conflatae, penna corvina teneriores digitales aut breviores, infra bulborum basin in nodum vel acervum, rhizoma mentientem collectae, fibris squamulisque vetustis et emarcidis solutis, nigrescentibus interstinctae. Bulbi plures in variis evolutionis suae stadiis nunc per-

fecti, nunc foliorum basin vaginantem et incrassatam efficientes, squamis imbricatis, inaequalibus erectis, rarius laxis, deltoideis, acutis, coriaceis, nervosis, punctatis, laevissimis, nitidis, saepe laceris atque emortuis tandemque fibrillosis basi involvuntur; immaturi vel juniores magis in ambitu locati, teretes, saepe vaginantes, interiores solitarii, perfecti, cylindrico ovales, haud angulosi, nervoso striati, extus virides, glabri, pollices circiter duos longi, apice saepius nudi vel mono-rarius diphylli. Folia erecta, tandem laxa, pedes duos ad tres longa, pollices duos lata, longissime linearia, lamina apicem versus paullo latiore, sublanceolata, acumine brevi obtuso, bifido vel etiam integerrima, plana, nervosa, nervo primario subtus carinato, secundariis numerosissimis percursa, coriacea rigida, pallidius viridia, a medio inde attenuata, inferne angustissima, semiteretia, antice canaliculata, ibique alterum folium vaginantia dum terminale bulbi, vel basi dilatata et incrassata, dum radicalia bulbos centrales vaginantia, ipsa futuri bulbi rudimenta exhibentia. Scapi modo congenerum consueto ex ima bulbi basi et inter ejusdem squamas basilares nati, duobus numquam plures, uniflori, folio triplo, vel quadruplo breviores, erecti, leviter flexuosi, articulati, teretes, bracteis alternis distichis imbricatis, cylindricis, acutis, mucronatis, ventricosis, nervoso striatis, punctulatis, membranaceis, pellucidis, purpurascenti viridibus, pollicem longis muniti. Flos terminalis erectus haud resupinatus, ultra duos pollices longus universe colore sulphureo imbutus, sepala acutiuscula mucronata, omnia marginibus lateraliter revoluta, subcarnosa, nervis parallelis numerosis elevato striata; superiora tria erecta in galeam lanceolata, supremo convexo interioribus paullisper latiore; infima basi latissima rotundata, columnae basi productae adnata et saccum subrotundum ventricosum nec compressum formantia, oblique oblonga, reliquis sepalis latiora, a medio inde reflexa patula. Labellum sepalis triplo brevius adscendens, ungue brevissimo cum columnae processu connatum lamina concava, subrotunda, carnosa, intus nuda, extus profunde sulcata, margine laterali simpliciter emarginatum, apice breviter trilobum; lobis lateralibus semicircularibus integerrimis, terminali vel intermedio ovato, acuto, crenulato, undulato. Columna labelli longitudine, curvata semiteres, antice plana, apicem versus crassior, glabra, nuda, processu basilari versus labelli insertionem incrassato, superiore parte columnae ipsius vix multum breviore. Anthera conica obtusa, galeam haud male referens, dorsi carina obtusa, antice prominula, intus bilocularis. Pollinis massae quatuor inaequales.

Crescit ad arborum truncos in montibus Peruviae versus Pampayaco. Floret Novembre.

31. MAXILLARIA SETIGERA Lind. Bot. Reg. XXXI. 1845. Misc. 88:

Pseudobulbis foliisque Oncidio ampliato similibus, scapis radicalibus cum floris squamis acuminatis subpaleaceis striatis suprema ovarii longitudine adpressa, sepalis lanceolatis mento obtuso, petalis linearibus paullo brevioribus apice abrupte setigeris, labello oblongo trilobo piloso lacinia media oblonga emarginata crispa lateralibus brevibus obtusis appendice ovata in medio, clinandrio fimbriato.

La Guayra. Leaves and pseudobulbs I have not seen. Flowers which grew single on scaly scapes, like Maxillaria picta, are pale yellow, slightly tinged with pink on the outside. The petals are almost exactly linear, terminating suddenly at the point in a fine bristle. The lip is for the most part white with a few scattered hairs over all its upper surface; the centre of the upper part is yellow, the sides of the lower part are streaked with crimson veins. The antherbed is bordered by a fine fringe. In many respects this approaches Maxillaria splendens, which however is easely known by its long grassy leaves.

Huc: *Maxillaria leptosepala* Hook. B. M. 4434:

Pseudobulbis ovato rotundatis ancipitibus compressis unifoliatis, folio lato lanceolato coriaceo obtuso inferne angustato, scapis radicalibus folio triplo brevioribus vaginatis, sepalis petalisque (brevibus) patentissimis

anguste lanceolatis acuminatis margine revolutis, labello obovato oblongo trilobo, lobis lateralibus obtusis, intermedio maximo revoluto obtuso marginibus dentato-fimbriatis disco pulvinato hirsuto.

Neu-Granada. Purdie.

Perigonium albidum; labellum antice flavum, lobi laterales purpurei.

32 MAXILLARIA CALLICHROMA Rchb. fil in Bonpl. II. 16:

Pseudobulbis rotundatis parvis cum foliis fusco guttulatis; foliis oblongis acutis basi valde attenuatis, pedunculo dense vaginato, vaginis amplis paleaceis papillis nitentibus sparsis maculatis, ovario muriculato, perigonio patulo, sepalis lanceolatis acutis, lateralibus divaricatis, tepalis linearilanceolatis acutis subbrevioribus, labello trilobo tepalorum longitudinem haud omnino aequante, lobis lateralibus rotundatis, medio labello abrupte retusis, lobo medio porrecto oblongo obtusiusculo crispo, callo depresso obtusato a basi medium versus producto, ante lobi medii originem desinente, basi labelli sericeo-puberula, androclinio minutissime denticulato marginato, anthera vertice carinata.

Blüthen gelbbraun, Lippe weiss und gelb, Seitenlappen purpuradrig, Säule purpurn. Blüthe so gross, wie die der M. leptosepala, der diese Art sehr nahe steht. Ebenfalls scheint M. setigera sehr verwandt zu sein; diese soll aber an der Spitze Borsten tragende Tepalen haben. Es musste die relative Länge der Borsten angeführt angeführt werden. Ferner soll der Saum des Androclinium gewimpert sein. Endlich sollen die Pseudobulben und Blätter denen des Oncidium ampliatum gleichen', woran kein Gedanke. Caracas. 6000'. April. Wagener.

33. MAXILLARIA NIGRESCENS Lindl. Orch. Lind. 1846. N. 105. p. 20:

Acaulis scapigera, foliis oblongo-ligulatis acutis basi complicatis, vaginis imbricatis, inferioribus ovatis, superioribus elongatis, summa ovario longiore, sepalis elongatis lato linearibus, petalis acuminatis, labello oblongo indiviso undulato apice pubescente, appendice rotundata.

„An epiphyte, with oval, compressed blackish pseudobulbs, deep blood red petals and a purple lip. Merida at the height from 5000—8000'. Jun." N. 628.

Leaves 1½" broad; sepals 1" long; scape about 4 inches long.

Rchb. fil. in Bpl. II. 280. Wälder Ocannas. Mai. 6—7000'. Nr. 1167. Schlim.

Rchb. fil. in Bpl. II. 15. 5000'. Blühte im Hamburger bot. Garten. Eine muthmaasslich verschiedene Art mit einfach gespreizten Blüthenhüllblättern sammelte Herr Wagener bei Hato Arriba 16. März 1849. Der Blüthenstiel ist viel kürzer. Ich kenne diese nur nach einer Abbildung. Die ächte M. nigrescens hat nämlich die Eigenschaft, dass die Tepala nach vorn und unten umgebogen sind, was ihr ein höchst abenteuerliches Ansehen giebt.

Huc: *Maxillaria rubrofusca* Klotzsch Sem. Berol. 1853

Pseudobulbis oblongis, apice obliquis, ancipitibus, unifoliatis; foliis elongato-oblongis coriaceis rigidis unicostatis, basi conduplicato-attenuatis, apice rotundato-subemarginatis; scapo radicali unifloro bracteis vaginantibus amplexicaulibus brevi-acutis, inferne imbricatis, superne remotis, suprema germen aequante instructo; perigonii foliolis fusco-purpureis lineari-lanceolatis subito acutis, margine recurvis, exterioribus longissimis deflexo-pendulis brevioribus; labello apice trilobo concavo atro-purpureo nitido, lobis apice crenato-dentatis, appendice linguaeformi atro adnato inter lacinias laterales costis elevatis duabus parallelis approximato; anthera fusca cristata.

Pseudobulbi 1½—2 poll. longi, vix pollicem lati. Folia pedem longa, 16 lineas lata. Scapi 4 pollices longi. Bracteae pollicem longae. Perigonii foliola exteriora 18 lineas longa, 4 lineas ad basin lata, interiora subfalcata, 16 lineas longa et 3 lineas

lata. Gynostemium fusco-purpureum, arcuato-clavatum, intus concavum, 6 lineas longum. Labellum rigidum, apice subreflexum, 8 lineas longum, 5 lineas latum. America centralis. De Warscewicz. Floruit in horto Berolinensi M. Oct. 1853.

34. MAXILLARIA PENTURA Lindl. Orch. Lind. 1846. p. 20:

Acaulis, scapigera, foliis lanceolato-ligulatis papyraceis acutissimis scapo vix longioribus, vaginis linearibus convolutis obtusis suprema ovario longiore, sepalis linearibus caudatis petalisque brevioribus acuminatissimis, labello oblongo undulato trilobo lacinia intermedia majore cochleata appendice acuta canaliculata.

„An epiphyte, with oval, compressed pseudobulbs, and a reddish flower. Forests of Merida, at the height of 6000'. Juli." Nr. — Scape 6" high; sepals 3 inches long; leaves $^3/_4$" broad.

Rchb. fil. in Bpl. II. 15. Die Pflanze stimmt nicht ganz: die Scheiden sind nicht stumpf, wie angegeben, sondern spitz. Allein diese Begriffe verwechselt man in England häufig. Das Anhängsel findet sich schwer an der Lippe der getrockneten Pflanze, im Leben muss es stark markirt sein. Wagener.

35. MAXILLARIA LONGIPES Lindl. Benth. Pl. Hartwg. p. 154. Aug. 1845.:

Acaulis foliis oblongis acutis petiolo duplo longioribus, scapis rectis petiolo paulo longioribus, vaginis apiculatis adpressis, suprema obtusa ovarii longitudine, sepalis angustis acuminatis obtusis*), labello oblongo trilobo obtuso medio sulcato.

Folium ultra pedale. Sepala fere bipollicaria. In montibus Loxa.

36. MAXILLARIA NUTANS Lindl. in Benth. Pl. Hartwg. p. 154. Aug. 1845:

Acaulis foliis erectis ovalibus petiolo canaliculato triplo longioribus scapo aequalibus, scapi vaginis acuminatis supremo*) ovarii longitudine, flore nutante, sepalis ovato-lanceolatis lateralibus valde productis, labello ovali obtuso utrinqne emarginato apice carnoso intus pubescente tuberculo emarginato, anthera cristata.

In montes**) Chuquirabambae. Aug. Scapus pedalis.

37. MAXILLARIA PICTA Hook. B. M. 3154:

Bulbis ovatis 1—2phyllis, foliis linearilanceolatis, scapo radicali unifloro, petalis incurvo patentibus lineari-oblongis subaequalibus discoloribus maculatis, 2 inferioribus basi subproductis, labello oblongo incurvo trilobo disco elevato pubescente, lobis lateralibus incurvis, terminali subcordato acuto.

Received by Mrs. Arnold Harrison, from her brother in Brasil, where it was gathered in that spot, so fertile in vegetables of this family, the Organ Mountains. Dec. 32.

Labellum album violaceo punctatum. Perigonii phylla extus alba violaceo punctulata, intus flava rubro maculata; columna violacea.

Bot. Reg. XXI. 1836. 1802:

Pseudobulbis ovatis subsulcatis 1—2phyllis, foliis oblongo-lanceolatis planis, scapis erectis unifloris distanter vaginatis, foliis duplo brevioribus, sepalis petalisque lanceolatis (abrupte acutis) subconniventibus, labello trilobo medio unituberculato, lobis oblongis obtusis lateralibus brevioribus.

var. brunnea: sepalis extus aequaliter brunneis. Huc:

Maxillaria consanguinea Klotzsch Semin. Berol. 1852. 12.

Caule repente pseudobulboso, pseudobublis elongatis compressiusculis, costatis, diphyllis, foliis oblongolanceolatis cuspidatis, planis, uni-

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*) Sic vult ill. Lindley!

**) Sic!

costatis, basi conduplicato attenuatis, subrigidis, supra laete, subtus albido viridibus; scapis unifloris, bracteis tribus amplexicaulibus cucullatis, distantibus, membranaceis, luteis, carinatis, acutis, a germine purpureo remotis, perigonii foliolis exterioribus lanceolatis, subenerviis, acutissimis, luteis, margine rubro cinctis, patentissimis, interioribus brevioribus angustioribusque acuminatis, strictis, pallide luteis; labello trilobo ex albido luteo, purpureo maculato, lobis lateralibus erectis rotundatis, intermedio ovato obtuso recurvato glabro, appendice linguaeformi minutissime glanduloso puberula adnata inter lobos laterales; gynostemio arcuato glabro dorso luteo, antice purpureo, labello duplo breviore, germine tereti.

Obs. Huc etiam *Maxillaria monoceros* Klotzsch, *fuscata* Klotzsch. — Rchb. fil.

38. MAXILLARIA ACUTIPETALA Hook. Bot. Mag. 1843. 3966:

Pseudobulbis oblongo-ovatis angulatis diphyllis, foliis lato-linearibus acutis, scapis radicalibus uni—bifloris, sepalis petalisque oblongis acutis patentibus subconformibus, labello oblongo trilobo centro striato basique lineis elevatis subquinis, lobis lateralibus brevibus columnam involventibus intermedio acuto reflexo.

Allied on the one hand to *M. tenuifolia* Lindl. B. Reg. 1839. t. 8. and on the other to *M. picta* Hook. Central America.

Flores aurantiaci purpureo picti.

39. MAXILLARIA GRACILIS Lodd. Bot. Cab. 1837.

40. MAXILLARIA MARGINATA Fenzl in Van Houtte Flore des Serres X. 110. *Cymbidium marginatum* Lindl. B. R. 1530.

Huc: *Maxillaria deflexa* Klotzsch Mss. in Sem. hort. Berol. 1852. p. 12:

Caule repente, subcarnoso, pseudobulboso; pseudobulbis elongatis, compressiusculis, costatis, diphyllis, foliis oblongolanceolatis, acutissimis, planis, unicostatis, basi conduplicato attenuatis, subrigidis, supra laete, subtus albidoviridibus; scapis unifloris axillaribus; bracteis tribus amplexicaulibus cucullatis, distantibus, membranaceis, fuscis, carinatis, acutissimis, a germine purpurascente remotis, perigonii foliolis exterioribus lanceolatis, subenerviis, acutissimis, galeatis, pallide flavidis, extus praesertim media parte et ad marginem rubescentibus, interioribus, brevioribus, angustioribus, acuminatis, conniventibus, ex albido luteis, labello trilobo, flavido, purpureo maculato, lobis lateralibus erectis rotundatis, intermedio ovato lanceolato, acuto, recurvato glabro, appendice inter lobos laterales linguaeformi adnata; gynostemio arcuato, glabro, lutescente labello duplo breviore, germine tereti. Cymbidium marginatum H. Berol. Caulis crassitudine pennae olorinae, squamis paleaceis.

Maxillaria punctulata Klotzsch Allg. Gartenz. 1851. p. 249:

Caulescens pseudobulbis oblongis, versus apicem attenuatis bifoliatis, bifariam imbricatis; squamis amplexicaulibus membranaceis, aridis, glabris densissime nervosis, sursum longioribus; foliis coriaceis unicostatis, ligulatis, acutis, subtortuosis, basi conduplicato attenuatis, pedunculis unifloris, infra pseudobulbos ex squamarum axillis enatis, foliis brevioribus, teretibus, 4—5 bracteatis; bracteis distantibus, amplexicaulibus, acutis, subcarinatis, membranaceis, fuscescentibus, aridis, a germine remotis, perianthii foliolis oblongis, lanceolatis viridi lutescentibus, acutis, margine rubescentibus, exterioribus patentibus, interioribus duplo minoribus conniventibus, labello oblongo, trilobo, flavido margine purpureo guttato, centro laevi, supra basin subpulvinato, lateralibus brevibus, intermedio obtuso, subrecurvo, anthera ovata, obtusa, rubescente, semibiloculari, puberula; glandula lunata, columna clavata, incurva, dorso

convexa, antice plana, basi productis, germine purpurascente: obtuse trigono, deorsum attenuato.

Pseudobulbi 3 pollices longi, compressiusculi, 8 lineas lati; folia 6—7 pollices longa, 12—14 lineas lata. Pedunculi 6 pollices longi, perianthii foliola extus pollicem longa, 3 lineas lata, interiora 8 lineas longa, 1½ lineas lata. Labellum 8 lineas longa. — Rio Janeiro.

Huc: *Maxillaria tricolor* Lindl. Lond. Journ. I. 1842. p. 189:

Pseudobulbis ovalibus, sulcatis, diphyllis, foliis oblongis coriaceis basi angustatis, scapis unifloris e squamis imbricatis, acutis, pseudobulbum novum vestientibus, sepalis ovato lanceolatis acuminatis petalis conformibus, labello carnoso trilobo cucullato laciniis rotundatis intermedio undulato, callo solitario in medio. —

On rocks in a wood at Rio Compaldo. Sept. Gardner.

Flores albo-virescentes; sepalis petalisque purpureo-marginatis, labelli lobis apice apice pseudobulbisque atroviolaceis.

41. MAXILLARIA PENDULIFLORA Fenzl Van Houtt. Fl. des Serres X. 110:

Caudice rhizomatoso crasso flexuoso ramoso repente imbricato squamoso pseudobulbos remotos 1—3 pollicares e basi subovata oblongo lineares, ancipiti compressos, faciebus valide 3—4 costatos, diphyllos alente, foliis late linearilanceolatis acutis, enerviis, erecto recurvis, in petiolum plus minusve distinctum attenuatis, basi complicato compressis; scapis unifloris, in singulo ramo ut plurimum tribus flaccide pendulis, vaginatis, foliis brevioribus, purpureis; perigonii foliolis exterioribus pollicaribus, late linearibus acuminatis flavis, extus purpura ultra medium suffusis, postico adscendente porrecto subgaleato, lateralibus patentissime oblique recurvis, interioribus concoloribus flavis, columnae parallelis, subbrevioribus ac dimidio angustioribus, omnibus margine subrevolutis; labello flavo, foliolis externis triente breviore, oblongo-lanceolato, disco callo longitudinali lineari apice rotundato puberulo instructo, medio trilobo, lobis lateralibus parvulis ovatis rotundatis antice porrectis, terminali ovato-oblongo acuto apice canaliculato, recurvo subundulato, cum lateralibus ocellis marginalibus magnis umbrino purpureis, interruptis ac confluentibus elegantissime picto; columna dimidia labelli longitudine dilute viridi flavescente glabra; anthera mitraeformi incurvo apiculata.

42. MAXILLARIA MELEAGRIS Lindl. Bot. Reg. XXX. 1844. Misc. 9:

Caulescens pseudobulbis ovalibus ancipitibus, foliis solitariis angustis obtusis emarginatis undulatis, sepalis petalisque acuminatis, labelli oblongi lobo medio subemarginato sub apice carinato lateralibus nanis duplo longiore, tuberculo transverso subcrenato basi tricostato.

A caulescent species of little beauty. Its flowers are spotted with purple upon a yellowish white ground: the lip is dark purple. The specimen is from Mss. Loddiges, who imported it from Oaxaca.

Obs. Me judice non est vere caulescens. Specimina bene nunc, ubi vetusta, caulem sublevant, sed plurima vere acaulia. Plantam vivam siccamque bene observavi. R. f.

43. MAXILLARIA CUCULLATA Lindl. Bot. Reg. XXVI. 1840. 12. B. M. 1842. 3945:

Pseudobulbis ovalibus compressis monophyllis, folio lato scapis longiore, vaginis imbricatis inflatis, bractea cucullata ovario longiore, sepalis ovatis acuminatis erectis, petalis conformibus paulo minoribus, labello oblongo carnoso trilobo petalorum longitudine, lobis lateralibus nanis intermedio elongato obtuso apice incrassato apiculato, callo disci spathulato loborum lateralium longitudine.

Equinoctial America, whence it is said to have been brought by Mr. Heuchman to the Duke of Devonshire. Habit and general appearance approaches to Trigonidia. It belongs to a rather large section of true Maxillaria, characterized by their peduncles being constantly one flowered densely clothed with scale-like sheathes, and proceding immediately from the base of the pseudobulbs which lie upon the earth.

Perigonium brunneum, petala intus violacea, columna violacea, apice flava. Labellum violaceum.

44. MAXILLARIA RHOMBEA Lindl. Bot. Reg. XXVI. 1840 sub 12:

Acaulis, pseudobulbis ovalibus ancipitibus, foliis oblongis, vaginis acutis carinatis, bractea ovario aequali, sepalis petalisque acutis, labello subrhombeo-trilobo, lacinia intermedia oblonga apiculata medio exarata lateralibus nanis rotundatis appendice plana retusa longioribus.

Mexico: Oaxaca at Teoxomulco. Karwinski.

Huc: *Maxillaria hematoglossa* Rich. et Gal. tab. 25. Annal. sc. nat. 1845. Jan. p. 24:

Pseudobulbis ovoideis compressis 1-phyllis; folio oblongo apice obtuse bilobo; scapo radicali 1-floro, vaginato; flore magno, inverso, sepalis luteis basi bilabiatis; labello brevi, intense purpureo, subtrilobo.

Mexico.

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45. MAXILLARIA CROCEA Lindl. Bot. Reg. XXI. 1836. 1749:

Pseudobulbis oblongis compressis foliatis, foliis oblongis undulatis obtusis emarginatis late vaginantibus, scapis erectis unifloris laxe vaginatis foliis duplo brevioribus, sepalis petalisque anguste triangularibus apice elongatis abrupte acutis, labello obovato obtuso levissime trilobo apice carnoso crispo supra medium unituberculato. — Sepala et petala flava, labellum subtus purpureum.

Rio Janeiro.

46. MAXILLARIA OCHROLEUCA Lodd. L. O. 143.

47. MAXILLARIA CHLORANTHA Lindl. Bot. Reg. XXIII. 1837. sub 1986:

Acaulis, pseudobulbis ovalibus compressis monophyllis, foliis ligulato-oblongis, obtusis lucidis basi in petiolum canaliculatum angustatis, sepalis patulis subaequalibus linearibus acutis lateralibus basi parum obliquis, petalis linearibus conniventibus, labelli trilobi oblongi lobis lateralibus nanis obtusis planis intermedio producto ovato carnoso granulato crispo, callo solitario ovato.

Demerara. Lodd.

Flowers small, yellowish green, sweetscented.

Rchb. fil. Bonpl. II. 280. Pamplona: la Baja. Januar. 8000'. Nr. 1177. Schlim.
Rchb. fil. Bonpl. III. 67. Teoramas. April. Wagener.

48. MAXILLARIA BRUNNEA Lind., Rchb. fil. in Bpl. II. 281:

Affinis Maxillariae chloranthae folio late ligulato basi cuneato pedali, tepalis linearibus obtusis, sepalis paulo brevioribus, labello cuneato apice trilobo tepalis subaequilongo, lobis lateralibus rotundatis; lobo medio ligulato carnoso medio exarato brevi, carina depressa apice acuta a basi anto lobum medium, gynostemio incluso pede labello subaequilongo.

Species haud egregia sat similis vulgari *Maxillariae chloranthae* Lindl., sed notis datis bene diversa visa. Sepala ligulata obtuse acuta. Bractea ovario aequalis (quae nota a cel. Lindl. magni, a me haud magni habita). Androclinium prope perpendiculare. — Blüthen hellbraun. — Ocanna im Mai. Wälder. 7000'. Nr. 1161. Schlim.

49. MAXILLARIA VIRGUNCULA Rchb. fil. in Bpl. II. 16:

Pseudobulbis ovatis subancipitibus minutis, monophyllis, foliis ligulatis acutis basi angustatis, pedunculo gracillimo 2—3 parvivaginato.

bractea acuta ovarium subaequante, sepalis lanceotriangulis acuminatis, lateralibus ascendentibus, tepalis subaequalibus duplo minoribus, summo sepalo appositis, erectis, labello ligulato acuminato erecto,

Blüthe so gross, wie die der *Maxillaria melina*, Zipfel aber schmäler. Farbe rothbraun. Blätter 3—4 Zoll lang, in der Mitte ziemlich 1 Zoll breit. Caracas. 6000' Februar. Nur einmal beobachtet. Wagener. — Rchb. fil Xenia O. I. p. 24. Tab. 10. f. 2.

50. MAXILLARIA PULLA Lind., Rchb. fil. in Bpl. II. 280:

aff. Maxillariae virgunculae Rchb. fil.: foliis basi angustissime petiolato attenuatis lanceolatis acuminatis pergameneis, tepalis cuneato ovatis acuminatis, labello oblongo lanceolato, acuto, ante basin utrinque revoluto, callo ligulato carinato in basi.

Pseudobulbi obcordati lenticulares semipollicares; folia nunc spithamaea. Flores illis Maxillariae virgunculae pallide flaveoli nervis purpureis. Sepala lanceolata acuta. Gynostemium curvulum, apice obliquum more Lycastis, sed pollinis apparatus genetica. — Blüthen rosa mit rothen Streifen. Ocanna. 6000'. Juli. Nr. 33. Schlim.

Rchb. fil. Bonpl. III. 67. Ocanna. Wagener. 5000'. März. Daselbst auch eine var. stenotepala: flore majori, tepalis lanceolatis acutis.

51. MAXILLARIA BREVISCAPA Pöpp. Endl. Nov. Gen. et Sp. I. 36. Tab. LXII:

Bulbis cylindricis; foliis linearilanceolatis, scapos unifloros duplo excedentibus; labello oblongo, basi cuneato, apice utrinque unidentato, lobo terminali ovato, denticulato, crista disci villosa; tepalis interioribus oblongolanceolatis.

Crescit in arboribus sylvestribus Peruviae versus Pampayaco in locis editioribus frequens. Floret Novembre.

52. MAXILLARIA ARGYROPHYLLA Pöpp. Endl. Nov. Gen. et Sp. I. 36:

Bulbis ancipitibus apice emarginatis; foliis oblongis, scapos unifloros quintuplo excedentibus, subtus argenteo fibrosis; labelli oblongi, obovati lobulo terminali obtuse quadrangulari, emarginato; sepalis interioribus lanceolatis.

Crescit iisdem cum praecedente locis, at multo frequentior. Floret Januario.

53. MAXILLARIA RINGENS Rchb. fil. MSS:

Pedunculo multivaginato, vaginis nervosissimis scariosis obscure punctulatis, infimis abbreviatis, superioribus longioribus, summis apicibus ampliatis, apice ipso acutis, bractea ampla oblonga acuta scariosa ovarium aequante, mento parvo obtuso, sepalis ligulato acutis apice subito acuminato mucronatis, tepalis triangulo ligulatis acuminatis, paulo brevioribus, labello sepalis ter breviore, oblongo apice trifido, laciniis lateralibus antrorsis triangulis, lacinia media carnosa obtusangulo rhombea limbo crenulata, superficie sulcata, hinc puberula abbreviata, callo ligulato sulcato antice acuto a basi usque ante basin laciniae anticae, anthera apiculata.

Affinis etiam *Maxillariae ochroleucae*. Bene differre visa sepalis non acuminatis labellique lacinia antica valde abbreviata.

Oaxaca. Karwinski! Guatemala de Warsewicz!

54. MAXILLARIA COLORATA Rchb. fil. Mss.:

Pedunculo parvivaginato, vaginis arctis obtuse acutis sese haud attingentibus, ovario bractea apice ampliata longiori seu aequali, mento parvo, sepalo dorsali ligulato acuto, sepalis lateralibus subaequalibus incurvo deflexis, acutis, tepalis ligulato-linearibus acutis, labello perbrevi oblongo apice trilobo, lobis lateralibus obtusangulis antrorsis, lobo medio carnoso papuloso obtuso, callo abrupto semiquadrato in disco antico ante lobum anticum, columna paulo breviori, anthera dorso carinata.

Ex icone pseudobulbi rotundi (ancipites ?), folium petiolato attenuatum oblongum, perigonium flavidum, extus cinnabarino aspersum, intus flavum, labellum cinnabarinum atropurpureo limbatum, maculis atropurpureis. Similis etiam *M. longipedi* Ldl. Peru. v. Warscewicz.

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55. MAXILLARIA DESVAUXIANA Rchb. fil. Bonpl. III. 67:

aff. M. Parkeri: pseudobulbo monophyllo, folii coriacei bipedalis ligulati acuti petiolari basi octopollicari, pedunculis brevissimis dense acuto scariosoque magnivaginatis, bractea squamis subaequali, flore erecto, labello late ligulato apice paulo emarginato utrinque sinuato obscure trilobo, carinula hippocrepica in centro, disco lobi medii rugulosi verrucoso. — Pseudobulbus videtur compressus ligulatus, apice vix humeratus. Folium prope tres pollices latum. Mentum prope obsoletum. Sepala oblonga apiculata. Tepala paulo latiora et breviora. Labellum his paulo brevius. Gynostemium clavatum. Androclinium postice margine semirotundo elevato cinctum. Pollinia in glandula lunata.

Wir kennen diese Art längst aus Pariser Gärten, indem wir unserm Freunde Desvaux Blüthen verdanken, welche aus Cayenne stammen sollten. Sepalen ledergelb, Tepalen und Lippe kirschroth geadert und gefleckt. — Pericos. Wagener.

56. MAXILLARIA PARKERI Hook. B. M. 2729. —

57. MAXILLARIA LORIFOLIA Rchb. fil. Bonpl. II. 92:

aff. M. leptosepalae et callichromati: sepalis oblongis acutis, tepalis acuminatis, labelli lobis lateralibus rectangulis, medio producto ligulato acute crenulato, callo ligulato apice acuto triangulo a basi puberula in discum.

Folium coriaceum ligulatum acutum bipedale. Pedunculus densissime vaginatus, vaginae super ortum amplae acutae. Perigonium (an semper ?) clausum, mentum modicum. Sepala oblongo ligulata subito acuta; tepala angustiora apice attenuata acuminata, labellum cuneatum medio trilobum, lobi laterales rectanguli antice minute crenulati, lobus medius ligulatus acutiusculus, crenulatus, basi pilis planis pauciarticulatis sericeus, callus apice elevatulo acutus a basi ascendens usque inter lobos laterales progrediens. Gynostemium curvulum semiteres, stigmatis fovea inferne limbata, anthera apice carinato cristata. Aus La Guayra von Herrn Senator Jenisch eingeführt, von Herrn Kramer cultivirt.

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58. MAXILLARIA CURTIPES Hook. Ic. IV. 1841. t. 384:

Pseudobulbo elliptico compresso laevissimo monophyllo, folio lato linearilanceolato acutiusculo enervio basi complicato, scapo radicali pseudobulbum aequantis squamis fuscis membranaceis vaginato unifloro, sepalis petalisque subconformibus oblongis unicoloribus, labello oblongo obscure trilobo intus nitidissime purpureofusco disco tuberculo lato elevato.

Mexico. Parkinson, Esq.

Drawn from the living plant. It is a small species offering little beauty. Ranks near *M. rufescens* Lindl. Pseudobulbs are small and singularly smooth on the base of the surface. The leaf somewhat coriaceous. From the base of the bulb there are on each side the rudiments of new plants, clothed like the greater part of the scape with brown sheathing scales. Flower rather small of a yellowish buff colour, destitute of fragrance, the outer or underside of the labellum is obscurely spotted with red the inside, as well as the front of the column is deep redbrown and glossy.

59. MAXILLARIA LYONII Lindl. Bot. Reg. XXXI. 1841. N. 26:

Acaulis, pseudobulbis ovatis compressis laevibus nec angulatis corrugatisve, foliis lineari-lanceolatis apice oblique emarginatis, floribus solitariis, sepalis petalisque oblongis, obtusis, striatis, labello oblongo retuso emarginato, infra apicem scabro tuberculo oblongo in medio prope basin.

Little species from Mexico. It has very narrow grassy leaves and ovate smooth glaucous pseudobulbs. Flowers are dull purplish brown, very slightly bordered with a yellow tint.

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60 MAXILLARIA PORRECTA Lindl. Bot. Reg. 1838. XXIX. Misc. 173:

Foliis oblongo-lanceolatis trinerviis, pedunculo erecto unifloro vaginato, sepalis linearibus apice concavis obtusis lateralibus incurvis, petalis conformibus, labello angusto apice trilobo medio calloso pubescente, lobo medio convexo rotundato margine crispo revoluto.

Loddiges obtained it from Rio Janeiro. Flowers are about the size of those of Maxillaria picta, of a pale buff, with the sepals and petals tipped with dull red. Labellum is the same colour on the outside below the point.

61. MAXILLARIA LEPIDOTA Lindl. Ann. Nat. Hist. XV. 1845. p. 88:

Acaulis, foliis solitariis ligulatis acutissimis in petiolum angustatis, pedunculis unifloris acute vaginatis erectis dimidium folii aequantibus, sepalis elongatis linearibus acuminatis, petalis setaceo acuminatis duplo brevioribus, labello carnoso obovato trilobo apice carinato et utrinque lepidoto lacinia intermedia ovata lateraliumque apice margine anteriore crenatis, tuberculo angusto vix medium labelli attingente.

Popayan (Hartweg).

62. MAXILLARIA MATHEWSII Lindl. in Benth. Pl. Hartwg. p. 155. Aug. 1845:

Pseudobulbis obovatis, foliis ensiformibus oblique emarginatis, scapis duplo longioribus, vaginis scapi angustis appressis, sepalis linearibus obtusiusculis, labelli oblongi obtusiusculi trilobi lobis lateralibus parvis rotundatis intermedio oblongo carnosissimo; callo oblongo medio canaliculato.

Peru. Mathews.

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63. MAXILLARIA RUFESCENS Lindl. Bot. Reg. XXII. 1836. 1848. *M. fuscata* Hort.:

Pseudobulbis ovatis subtetragonis monophyllis, foliis lanceolatis utrinque emarginatis, scapis unifloris (prostratis) vaginis distantibus, sepalis petalisque oblongis conformibus obtusis, labello oblongo trilobo tuberculato laciniis lateralibus minimis acutis intermedia elongata emarginata. Supra fol. XXI. 1802 in textu.

Perigonii phylla 3 externa flavo rufescentia, columna et labellum et petala flava, columna et labellum purpureo punctata. Trinidad.

Rchb. fil. Bonpl. II. 16. 6000'. November. Caracas. Wagener. Diese Art trug bei Herrn Keferstein öfters Frucht, ohne sich zu öffnen. Es ist eine kleine Form, die Blüthe nur ⅔ der gewöhnlichen Grösse.

Huc: *Maxillaria acutifolia* Lindl. Bot. Reg. XXV. 1839. Misc. 148;

Pseudobulbis angustis ovalibus compressis monophyllis, folio oblongo-lanceolato acuminato, pedunculis unifloris radicalibus vaginatis, bractea carinata ovario longiore, sepalis petalisque oblongis, labello lineari-oblongo retuso emarginato medio pubescente apice glabro utrinque versus basin lacinia brevi acuta incurva aucto.

A species resembling M. rufescens, and having brownish orange flowers with little beauty. In the collection of Loddiges from Demerara.

Huc: *Maxillaria articulata* Kl. l. c. (1838.).

Pseudobulbis caespitosis oblongis parvis compressis ancipitibus leviter costatis unifoliatis, squamis tribus foliaceis conduplicatis inaequalibus acutissimis primum involucratis; foliis oblongis coriaceis acutis carinatis, apice recurvis, basi conduplicatim attenuatis; scapis solitariis basilaribus biarticulatis bibracteatis, articulis annulatim tumidis; bracteis dilute purpureis vaginato-inflatis, apice constrictis acutis, margine aridis, internodio brevioribus; floribus parvis solitariis e flavido-rutilis; foliolo superiore perigonii exterioris obovato mucronato convexo extus purpurascente, inferioribus e basi latiore oblongis brevi-acutis pallidioribus deflexis, interioribus erectis flavidis spathulatis mucronatis: labello oblongo exappendiculato trilobo flavido-purpureo punctato, lobis lateralibus brevissimis rotundatis; gynostemio elongato e viridi flavescente minutissime purpureo punctato; glandula purpurea anguste lunulata; germine cylindrico incurvo sulcato purpureo, bractea superiore duplo longiore.

Pseudobulbi pollicem longi, 8 lineas lati et 5 lineas crassi. Folia 4—5 pollices longa et 8—12 lineas lata. Scapus sesquipollicaris purpurascens. Bracteae 3 lineas longae. Foliolum perigonii exterioris superius 5 lineas longum et 3 lineas latum, inferiora et interiora 2 lineas lata. Gynostemium 4 lineas longum. Germen pollicem dimidium longum.

Venezuela. Wagener. Floruit in horto Berolinensi M. Sept. 1853.

Obs. Forsan huc sequentes duae species pertinent, quas non novi.

64. ? **MAXILLARIA GALEATA** Scheidw. Berl. Gartenz. 1842, 309:

Pseudobulbis ovatis compressis diphyllis, foliis ovato-oblongis, acutis, plicatis; scapis radicalibus unifloris; sepalo supremo petalisque lateralibus conniventibus subgaleatis, sepalis lateralibus patentibus, omnibus lanceolatis acutis, labelli trilobi lobo intermedio lingulato, lateralibus parvis acutis; anthera galeata loculorum valvulis membranaceis transversim dehiscentibus; pollinia 4, per paria in glandulam hyalinam transversam sessilia.

Scapus 2'' longus, purpureus; bracteae quatuor ventricosae, acutae, margine purpureae. Flores purpurei, striato-punctati, labellum cum basi producta columnae articulatum, atropurpureum, basi dilute roseum.

Brasilia.

65. ? **MAXILLARIA RUGOSA** Scheidw. in Berl. Gartenz. 1843. p. 101:

Pseudobulbis oblongis compressis sulcatis monophyllis vaginatis; foliis lanceolatis coriaceis rugosis apice obliquis, emarginatis mucronatis, basi plicatis, scapo unifloro vaginato erecto pseudobulbo longiore, scapi vaginis 6—8 ventricosis, marginatis, carinatis, acutis, sepalis lateralibus lanceolatis explanatis, supremo fornicato, petalis angustioribus conniventibus, labello trilobo, carnoso, lobis lateralibus integris, intermedio oblongo apice sulcato, in axi callo obcordato ad basin callo oblongo crassiore munita.

Brasilia. Affinis *M. galeatae* Scheidw.

66. **MAXILLARIA LINDENIANA** Rich. et Gal. tab. 261. Ann. sc. nat. 1845 p. 25. Jan.:

Pseudobulbis ovoideo-oblongis, 1-phyllis; foliis linearibus obtusis; scapo radicali vaginato; floribus roseis punctatis; labello intense purpureo trilobo, lobis lateralibus obtusis parvulis, intermedio majori carnoso.

Mexico.

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67. **MAXILLARIA SESSILIS** Lind. in Benth. Pl. Hartwg. p. 155. Aug. 1845:

Acaulis, pseudobulbis subrotundo-ovatis, foliis oblongis obtusis solitariis sessilibus scaporum longitudine, scapi vaginis 3—4 carinatis in-

fiatis suprema ovario breviore, sepalis lanceolatis acutis, petalis linearibus acutis duplo brevioribus, labelli trilobi lobo medio oblongo apiculato unguiculato basi 5 sulcato lateralibus dilatatis incurvis apice dentatis lineis 3 elevatis in medio venisque utrinque cristatis.

Parva species. Scapi vix 4 pollicares. Sepala sesquipollicaria. — In Cordillera prope Loxa.

68. MAXILLARIA HETEROCLITA Pöpp. Endl. Nov. Gen. p. 37. Tab. LXIII:

Bulbo ovato, anguloso; foliis oblongo-lanceolatis, planis scapo uni-vel bifloro longioribus; labelli oblongolanceolati, trilobi lobis lateralibus cristato pinnatifidis; columna medio late alata, apice demum increscente.

Bulbi ovales, subangulosi, radicibus subfasciculatis, leviter tomentosis suffulti, magni, extus cinereo virides. Folia vaginantia. Scapi uni- vel biflori, ex ima bulbi basi, subradicales, articulati, iisdem, ac bulbi basis squamis inclusi. Perianthii foliola aequalia, lanceolata, superiora tria erecta, inferiora patula, omnia flavo et purpureo alterne striata. Labellum ungue brevi cum styli basi elastice articulatum, lamina ascendente triloba: lobis lateralibus erectis, columnae adpressis, margine pinnatifido dentatis; niveis: lobo terminali integerrimo, coeruleo. Columna latus valde pubescens medio utrinque marginis membranacei processu incrassato, triangulari aucta; margine foveae terminalis, antherae recipiendae aptae undulato, post antherae delapsum incrassato, supra stigma convoluto, in lobos duos triangulares, carnosos et adpressos tunc excrescente. Pollinis massae quatuor cereaceae. caudiculae communi deltoideae insidentes. — Icon ad plantam vivam loco natali confecta. Specimina inter paucissima herbarii nostri fuere, quae ab insectis penitus corrosa reperimus.

69. MAXILLARIA NOTYLIOGLOSSA Rchb. fil. in Bonpl. II. 16:

Rhizomate dense vaginato debili, pseudobulbis remotis oblongo-linearibus, compressis diphyllis, foliis lineariligulatis, apice retuso bilobis, pedunculis ex axilla vaginae vetustae solitariis, di-, trivaginatis, vaginis compressis ancipitibus obtuse acutis contiguis, bractea subaequali spathacea ovarium paulo superante, sepalis lanceolatis apice subretusiusculo brevissime setaceo apiculatis, tepalis linearibus apice brevissime setaceis, tertia parte brevioribus, labello basi unguiculato, lamina triplo longiore angustato triangula basi hastata (labello igitur truellaeformi), callo ovali depresso antice angustato discum tertii basilaris in labello occupante, gynostemio clavato, anthera mitrata laevi.

Blüthe wenig kleiner, als die der *M. variabilis* Bat. (*revoluta* Hort.) gelbgrün. Trugknollen $1\frac{1}{2}$ Zoll lang, Blätter 2—3 Zoll lang, 3 Linien breit. Eine ähnliche Lippenform ist nur bei *M. hastulata* angegeben, die eben durch Lippe und zugespitzte Sepala, stielig verschmälerte Blätter u. s. w. verschieden ist. Caracas. 6000'. October. Wagener. — Rchb. fil. Xenia Orchidacea I. Tab. 10. II. 3. 4. p. 24.

70. MAXILLARIA MELINA Lindl. Orch p. 20. N. 103. 1846:

Acaulis, scapigera, foliis oblongis acutis scapo longioribus, vaginis laxis carinatis acutissimis subfalcatis suprema ovario subbreviore, sepalis petalisque ovato lanceolatis obtusiusculis, labello ovato obtuse acuminato, carnoso apice corrugato appendice subtrilobo, lamina intermedia retusa.

„An epiphyte with oval obtuse pseudobulbs and dirty yellow flowers. Forests of Merida at the height of 5600'. June. N. 641." Leaves one and half inch broad overrun with scaly masses. Scape 6'' high. Sepals an inch long.

Rchb. fil. Bonpl. II. 16. Caracas. 5000'. November. Wagener.

71. MAXILLARIA HASTULATA Lindl. sp. Benth. Pl. Hartwg. p. 154. Aug. 1845:

Acaulis, foliis oblongis acutis petiolis duplo longioribus, scapis petiolis subaequalibus, vaginis adpressis suprema ovario multo longiore, se-

palis angustis acuminatis, labello oblongo cuspidato apice carnoso basi convoluto tum hastulato, appendice oblonga carnosa plana supra basin acuta. Flores fusci. Scapi 3—4 pollicares. Sepala pollicem longa.

In Cordillera prope Loxa.

72. MAXILLARIA LAEVILABRIS Lindl. Benth. Pl. Hartwg. p. 155. Aug. 1845:

Pseudobulbis ovatis, foliis oblongis mucronulatis scapis aequalibus, vaginis scapi laxis carinatis; sepalis ovato-lanceolatis, petalis linearibus, labello subrotundo-oblongo trilobo laevi: lobo medio rotundato, lateralibus acutis. Scapi 5 pollices alti.

Peru. (Non ab Hartwegio lecta).

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73. MAXILLARIA EBURNEA Lindl. Sert. t. 40. N. 2:

Pseudobulbis ovatis sulcatis monophyllis, foliis lineari-oblongis acutis subcoriaceis in petiolum canaliculatum angustatis, scapo erecto multifloro vaginato longioribus, vaginis distantibus acutiusculis, sepalis explanatis lateralibus triangularibus, elongatis, supremo petalisque lanceolatis, labello ovato oblongo leviter crenulato, callo unico acuto per medium et duobus lateralibus squamatis multo minoribus, columna apice uncata cardine dentato.

Flowers 5 „from tip to tip of the lower sepals and of purest white. Leaves till 15" long, with chanelled stalk into which they taper at their junction with the pseudobulbs; texture more papery than leathery. — Allied to M. grandiflora, which is said to have compressed two leaved pseudobulbs and a lip plaited transversely at the base.

Sandstone formation near Mount Meracaevi, 6000 feet, in great abundance on trunks and branches, about 30 miles in NNE direction from Cimeralda.

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74. MAXILLARIA CROCEA Pöpp. Endl. Nov. Gen. 38. Tab. LXII. f. II.:

Bulbis anguloso cylindricis, foliis lineari oblongis, scapos unifloros quadruplo excedentibus; labelli oblongi, trifidi laciniis lateralibus subfalcatis, brevissimis, terminali quadrata, truncata, undulata; sepalis interioribus ovalibus.

Pampayaco Peruviae Pöppig.

Obs. Planta statu misero in Herbario Vindobonensi adest. Egregia ob sepala valde ovata paulo acuta. Nonne Ornithidium?? Nomen jam adest, sed mutare nolui, cum planta adeo dubia. — R. f.

Species obscurissimae.

MAXILLARIA BRACHYGLOSSA Rich. et Gal. Ann. sc. nat. Jan. 1845. 24:

Pseudobulbis ovoideis oblongis apice diphyllis; foliis lanceolatis, acutis; scapo 1-floro radicali vaginato; flore purpurascente, sepalis ovalibus; labello minimo trilobo, lobis lateralibus obtusis, intermedio carnoso obtuso.

Mexico.

MAXILLARIA GALEOTTIANA Rich. et Gal. Ann. sc. nat. 1845. Jan. p. 24:

Pseudobulbis oblongis compressis, costatis, 2-phyllis, foliis elliptico-lanceolatis, obtusis; scapo radicali, brevissimo 1-floro vaginato; floribus magnis luteis punctatis, labello pallidiore cucullato-canaliculato trilobo, lobo intermedio oblongo, obtuse sinuoso.

Mexico.

MAXILLARIA BOOTHII Lindl. Bot. Reg. 1838. XXIV. Misc. 95:

Rhizomate repente, pseudobulbis ovalibus compressis diphyllis, foliis angustatis obtusis, flore terminali infra bracteas carinatas submembranaceas distantes basi incluso, sepalis petalisque conformibus erectis angustis acutis, labello oblongo obtuso margine membranaceo.

Guatemala by George Mr. Skinner Esq., introd. in 1835 by Captain Sutton, who added it to Sir Charles Lemons coll. at Carclew, where it flowered in May 1838. Scape oneflowered, about 2" high, thin and compressed and having two large, thin, sheathing, acuminate bracts. It issues from the centre of an upright, keel-shaped, narrow leaf, which is imbricated at the base, and forms a sort of sheath, that protects the flower until it is ready to expand. Pedicels 1" long, dull green, with brownish spots. Sepals greenish-yellow. Petals of the same colour, as the sepals, but conniving and about a third shorter with a blunter point. Labellum the length of the petals, slightly recurved, rounded at the point, and keeled below with the outer edge, very thin and more delicate, than the rest. Towards the base are 2 fleshy processes of a deep yellow.

Obs. Herbarium illustris Lindley sistit specimen *Epidendri auriti* Lindl. (*Dinematis paleacei* Lindl.). Additae sunt analyses cujusdam Maxillariae delineatae.

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75. MAXILLARIA FUNEREA Lindl. Hook. Lond. Bot. Journ. 1842. I. p. 188:

Pseudobulbis oblongis sulcatis imbricatis diphyllis, foliis linearibus et lineari-lanceolatis strictis, floribus solitariis radicalibus, sepalis oblongis acutis, labello obovato nudo leviter trilobo, laciniis lateralibus dentiformibus, intermedia subcarnosa rotundata.

Hab. On dry rocks at Praga Vermelha. Gardener.

Species pusilla, floribus pseudobulbisque purpureofuscis. M. uncatae (quae nana Hook.) et aciculari affinis. Lindl.

76. MAXILLARIA PUMILA Hook. Bot. Mag. 3613. (N. S. XI.):

Nana, caulibus brevibus squamosis pseudo-bulbiferis, bulbis aggregatis oblongis sulcatis, folio solitario lanceolato, pedunculis pseudobulbo brevioribus unifloris, petalis sepalisque erectis oblongis obtusis, labello erecto oblongo obscure trilobo disco calloso, lobo terminali bifido. Perigonium flaveolum et rubro violaceum.

Demerara. Glasgow 4. 5. Inverarity.

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77. MAXILLARIA CRASSIFOLIA Rchb. fil. Bonpl. II. 16. *Heterotaxis crassifolia* Lindl. *Dicrypta Baueri* Lindl. Blüthen brennender gelb, als bei der cultivirten Art, sonst in allen Einzelheiten gleich. Caracas. 5000.' Mai. Wagener.

78. MAXILLARIA VIOLACEOPUNCTATA Rchb. fil. Bonpl. III. 216:

Aff. Maxillariae crassifoliae Rchb. fil. (Dicryptae Baueri Lindl.) sepalis oblongis apiculatis (nec triangulis), tepalis lineariligulatis acuminatis, labelli lobo medio triangulo carnoso, lobis lateralibus semiovatis antice angulatis, linea tomentosa a basi usque ante basin lobi medii.

Blüthe so gross wie die einer mittlern Maxillaria Parkeri, zusammengeneigt. Sepalen und Tepalen hellgrün. Lippe und Säule ebenso, allein erstere mit zahlreichen violetten Querbändchen und letztere voll dergleichen Puncte. Anthere kegelförmig; an den beiden Vorderkanten besetzt mit leuchtenden Papillen. Pollinia auf kurzer Caudicula und zu dieser eine quermondförmige Glandula. Aus Demerara eingeführt von Herrn Senator Jenisch, cultivirt von Herrn Kramer.

79. MAXILLARIA DISCOLOR. Huc: *Dicrypta discolor* G. Lodd. Mss. in B. R. XXV. 91:

Foliis latis papyraceis subtus discoloribus, labello linguaeformi linea media elevata villosa, antherae margine angulisque papillosis.

Messrs. Loddiges imported it from Demerara. It is remarkable for the deep purple colour of the underside of the leaves, and its lip has a thick villous line

running from the base almost to the apex. The flowers are orange coloured about the size of those of D. Baueri, and the species handsomer.

— Folia ligulata carnosa sulcata. —

80. MAXILLARIA CEPULA Rchb. fil. in Bonpl. III. 216:

aff. M. pumilae Hook. folio ligulato acuto canaliculato carnoso quinquepollicari, labello exaste cuneato antice trilobo, lobis lateralibus subquadratis microscopice denticulatis, lobo medio producto ligulato disco velutino, lamella depressa a basi in discum. Pseudobulbus teres sulcatus. Flos illis M. rufescentis majoris subaequalis. Sepalum summum lanceolatum acutum. Sepala lateralia altiora. Tepala ligulata acuta. Gynostemium apice bene clavatum. Von Rio Janeiro.

l. c. p. 226: Pseudobulbi oblongo fusiformes, a vaginis latis triangulis basi nervosis fuscis distichis involucrati. Folia ligulato linearia acutata valde carnosa bina. Ovaria crassa a squamis obcelata. Mentum obtusum parvum. Sepala lanceolata acuta fuscata. Tepala paulo latiora obtusiora purpureoviolaceo guttata. Labellum ochraceum atropurpureo pictum, cuneato ovatum, medio obtuse trilobum; lobus medius minute denticulatus, carina a basi unguis usque ante stricturam lobi medii angusta, ligulata; discus lobi medii carnoso rugosus. Gynostemium arcuatum gracile. Rostellum antice bilobum; fovea magna. Pollinia quaterna sessilia in caudicula subquadrata.

Huc pertinet sequens species, falsissima folii descriptione a nemine recognita, inde a me synonymi loco habita:

Maxillaria madida Lindl. Bot. Reg. XXIV. 1838. Misc. 74:

Caulescens, pseudobulbis ovatis, elongatis, subteretibus sulcatis diphyllis secus caulem imbricatis, foliis lanceolatis linearibusque acutis subplicatis canaliculatis, floribus solitariis intra spatham siccam squamosam subsessilibus, sepalis subparallelis acutis lateralibus, basi parum productis, petalis conformibus; labelli trilobi medio callosi lobis lateralibus inconspicuis, intermedio rotundato plano obtuso recurvo disco madido et discolore, columna clavata arcuata labello longiore.

One of the least showy of the genus: nearly related to M. acicularis, with some others in the possession of Messrs. Loddiges forms a well marked group. Flowers are a dull dirty yellow, spotted obscurely with yellowish brown. The labellum has a broad chocolate brown blotch at the end, where it is so shining as to look as if wetted; this circumstance has suggested the specific name. It is a native of Brazil.

81. MAXILLARIA UNCATA Lindl. Bot. Reg. XXIII. 1837. sub 1986:

Caulescens, pseudobulbis in axillis squamarum membranacearum iisque brevioribus teretibus sulcatis monophyllis, foliis linearibus canaliculatis obtusis, sepalis lateralibus basi maxime productis, petalis sepaloque supremo quadruplo majoribus, labello oblongo obtuso carnoso margine crispo membranaceo basi angustato disco unicalloso, columna apice utrinque uncata.

Demerara. Coll. Lodd.

Huc: *Maxillaria nana* Hook. Ic. IV. 1841. t. 315:

Humilis, caule folioso, foliis lineari-lanceolatis subfalcatis rigidis, floribus solitariis, axillaribus (ochroleucis), columna superne antice bialata, labello oblongo trilobo lobo medio obtusissimo cum acuminulo, disco glandula aurantiaca.

Demerara. C. L. Parker. Esq.

Proliferous habit approaches Scaphyglottis: at the setting on of the leaves and of the flowers also there are copious membranaceous sheathing scales. The sepals and

petals are erect, cream coloured. The column is prolonged below the apex of the germen so as with the base of the labellum to form an obtuse spur. Pollenmasses 4, unequal, attached to a large, 2 toothed membranaceous gland.

— Subulifolia. —

82. MAXILLARIA ACICULARIS Herbert Bot. Reg. XXIII. 1837. sub 1986. — (B. 41. 4874):

Subcaulescens, pseudobulbis subfusiformibus sulcatis diphyllis basi squamosis, foliis linearibus, acuminatis canaliculatis dorso convexis, pedunculis arctissime squamosis axillaribus unifloris, perianthio connivente, sepalis petalisque ovatis acutis, petalis obtusioribus, labello indiviso oblongo obtuso disco illinito, callo lineari apice rotundato integro.

Brazil: coll. of the Hon. and Rev. W. Herbert.

Flowers purplish chocolate. I only know this from a drawing by Mr. Herbert The structure of the flowers requires to be reexamined. The pollinia I have not seen at all.

83. MAXILLARIA SUBULATA L. O. 147.

Caulescentes.

Obs. Pre Maxillaria caulescente illam tantum habeo, quae semper et a prima evolutione] pollet caule; bene erecto seu ascendente. Forsan omnes „acaules“ nunc occurrunt „caulescentes“, praesertim ubi truncos adscendunt. Inde *Maxillariam Meleagridem* Lindl. ab ipso cl. auctore ad „caulescentes“ relatam, in „acaulibus“ collocavi. Ipsa *M. marginata* Fenzl. saepe „subcaulescens“ occurrit. Rchb. fil.

† Caulescentes pseudobulbiferae.

84. MAXILLARIA STENOPHYLLA Rchb. fil. in Bonpl. II. 17:

Caule gracili dense foliato, vaginis abbreviatis, laminis linearibus apice bilobis, pseudobulbis lineariellipticis apice diphyllis, pedunculo solitario apice vaginato, vaginis imbricantibus acutis, internodio dein nudo, bractea vaginaeformi obtuse acuta, ovarii tertiam aequante, sepalis oblongis acutis, tepalis angustioribus basi dilatatis acutis, subaequilongis, labello ligulato, medio obscure obtuseque trilobo, apice retuso, callo lineari a basi ad medium discum, androclinio postice acuto.

Blüthen so gross, wie die einer kleinen *M. variabilis* Bat., blassgelb. Sepala und Lippe mit kleinen rothen Flecken inwendig bespritzt. Blätter 2—3 Zoll lang, 2—3 Linien breit. Caracas. 5000'. Wagener.

85. MAXILLARIA PASTENSIS Rchb. fil. in Bonpl. III. 239:

Aff. M. stenophyllae vaginis valde arpophyllaceis, pseudobulbis rarissimis ovatoligulatis, foliis abbreviatis leneariligulatis bilobis nitidis, gynostemio brevissimo; labello ovali basin versus utrinque sinuato, callo tumido depresso lato a basi usque ad sinus.

Caulis ultra spithamaeus arcte vestitus vaginis egregie rugulosis margine membranaceis. Folia valde nitida, sesquipollicaria, egregie biloba. Flores illis *M. variabilis* Bat. aequales. Pedunculus tenuis vagina una in basi; bractea cucullata membranacea, dorso carinata, apiculata, ovario duplo brevior. Sepala oblonga apice angustata. Tepala ovalia apice obtusa; in sicca planta valde nervosa. Gynostemium clavatum breve. Woods near Pasto. Septbr. 1845. 495I Jameson.

86. MAXILLARIA INFAUSTA Rchb. fil. in Bonpl. III. 216:

Affinis M. stenophyllae (pseudobulbis nullis?), foliis latioribus, sepalis oblongis, tepalis ovatis, labello latiori utrinque ante medium unilobo, antice retuso, callo tricarinato brevi pone sinus, gynostemio brevissimo.

Praesto est caulis spithamaeus. Vaginae grosse sulcatogyrosae praesertim infimae. Folia ligulata bipollicaria, tertiam pollicis vix lata, apice biloba; folia infima vix pollicaria. Ovaria longe exserta bracteam cucullatam ter—quater superantia. Perigonium breve, ochraceum? illo Maxillariae variabilis minus. Maxillaria stenophylla pollet perigonii sepalis tepalisque longioribus, gynostemio gracili. Peru: Chachapoyas. Matthews. (Herb. Boiss.)

87 MAXILLARIA CHRISTOBALENSIS Rchb fil. v. Schl. B. Z. 1852. 857:

Caulibus validis, a foliorum vaginis distichis vaginatis, ramulis (pseudobulbis) in axilla vulgo duodecimae vaginae sessilibus, diphyllis, foliis linearibus apice inaequalibus, floribus solitariis in axillis vaginarum, pedunculis 1—2 vaginatis, mento parvo, perigonii phyllis externis oblongis acutis, lateralibus internis ligulatis retusis cum apiculo, labello a basi cuneata angusta dilatato, trilobo, lobis lateralibus obtusatis erectis, lobo medio producto retuso, callo oblongo inter lobos laterales, gynostemio clavato, antice utrinque angulato, postice minutissime denticulato.

Blüthen so gross, wie bei *M. variabilis*, anscheinend braun. — Maxillaria — 1359. Peruv. suband. Cerro de San Christobal prope Cuchero. Septbr. 1819. Pöppig.

88. MAXILLARIA TENUIFOLIA Lindl. Bot. Reg. XXIII. sub 1986. XXV. Tab. 8:

Caulescens, pseudobulbis ovato-oblongis compressis monophyllis squamis longioribus, foliis linearilanceolatis acutis recurvis, pedunculis axillaribus solitariis basi squamatis, ovario denudato arcuato, floribus cernuis, sepalis ovato-lanceolatis, margine revolutis subaequalibus reflexis, lateralibus basi subaequalibus, petalis ovatis obtusis conniventibus, labello oblongo indiviso, apice ovato reflexo infra apicem utrinque contracto, callo disci oblongo integerrimo.

Mexico, found near Vera Cruz by Mr. Hartweg.

Perigonium flavum purpureo lavatum ac guttatum.

89. MAXILLARIA MACLEEI Bateman in litt. Bot. Reg. XXVI. 1840. Misc. 155:

Subcaulescens, pseudobulbis confertis oblongis monophyllis subcompressis, foliis aciculatis, pedunculis axillaribus solitariis basi squamatis, floribus rectis, sepalis ovato-lanceolatis acutis conniventibus, petalis multo brevioribus acutis paululum recurvis, labello oblongo indiviso margine plano apice haud reflexo, callo disci oblongo integro.

Pseudobulbs a true oblong, instead of tapering as do those of M. tenuifolia. Leaves of M. M. ⅙ the length of the leaves of M. tenuifolia; sepals and petals perfectly plane, the edges recurved in M. tenuifolia, sepals turned backwards in M. tenuifolia and petals connivent; in M. M. exactly the reverse. The lip moreover of the latter is not recurved. Sepals and petals of M. Macleei internally of a uniform rich reddish brown, and its lip whitish, with intense maroon spots, while in M. tenuifolia there is a considerable admixture of yellow, both in sepals, petals and lip. Mr. Skinner found it in Guatemala. Called after his worthy partner, Mr. Klee.

90. MAXILLARIA ELATIOR Rchb. fil. *Dicrypta elatior* Rchb. fil. in Linnaea 1843. p. 403:

Foliis lanceolatis obtusis vaginantibus distichis, floribus solitariis axillaribus, ovario pedunculum aequante, sepalis petalisque minoribus oblongis obtuse acutis, labello ligulato apice angustato basi obscure discato.

Die bis fusslangen Blätter anscheinend unterseits violett gefärbt. Die Blüthen, augenscheinlich im Leben gelb, sind um die Hälfte grösser, als die der *Dicrypta Baueri* Lindl. Die Säule ist schlank, etwas gekrümmt, von der Länge der Lippe. 4 längliche seitlich abgeflachte Pollenkörper, zu zweien auf einander liegend. — Die Anthere sah ich nicht. — Die Pflanze unterscheidet sich durch schmälere Blätter, geringe und plötzliche Zuspitzung der länglichen Kelchblätter, die fast wulstlose

Lippe von *Dicrypta Baueri* Lindl. *Dicrypta densifolia* Pöpp. et Endl. weicht vorzüglich ab durch die an der Basis gesackten, äusseren, seitlichen Kelchblätter. *Dicrypta discolor* Lodd. hat eine auf der Mittellinie der Lippe verlaufende Haarlinie.

Huc: *Maxillaria triangularis* Lindl. Bot. Reg. 1845. XXXI. Misc. p. 9:

Caulescens, pseudobulbis ovalibus ancipitibus utrinque corrugato sulcatis, foliis ligulatis apice obliquis, floribus solitariis axillaribus ebracteatis, sepalis subaequalibus patentissimis margine in formam triangularem recurvis, lateralibus paulo majoribus, petalis conformibus minoribus erectis, labello oblongo ciliato puberulo cum columna parallelo emarginato concavo medio verruca solitaria polita aucto, anthera conico scabra.

In the village of Quezaltenango in Guatemala Hartweg. Its leaves are very much larger than in tenuifolia (10 by 1¼ intes), the flowers are formed singly in the axils of the imperfect leaves, which precede the appearence of the perfect leaves and terminal pseudobulbs of such plants. They are of a rich cinnamomon brown gaily mottled with crimson flecks. The sepals which spreed widely apart, are folded back at their edges into a triangular form.

Cf. Rchb. fil. Bonpl. II. 16. Est „flor del Canelo" Mexicanorum.

91. MAXILLARIA PANTHERINA Rchb. fil. in Bonpl. III. 237:

Affinis M. triangulari Lindl. multo minor, foliis oblongis abbreviatis, labello cuneato apice retuso, subcarnoso, medio gibbere retuso signato; gynostemio clavato.

Caulis strictus vaginis distichis lanceis arctis arpophyllaceis apice hinc purpureis vestitus. Pseudobulbi distantes ligulati duos pollices longi, dimidium pollicem lati. Folia non nisi in ipsis pseudobulbis, ac in folio stipanti unico seu duobus, oblonga, apicem versus uti basi attenuata, apice retusa cum apiculo nunc valde insigni, subpergamenea, quatuor ad quinqùe pollices longa, plus unum lata. Flores in axillis omnium vaginarum surculi juvenis Lockhartiam ludentis; omnes clausi in specimine, quod praesto est, illis *Maxillariae variabilis* Bat. (= *revolutae* Klotzsch) paulo majores illo statu. Pedunculi vaginas paulo excedentes vaginis distichis onusti. Bractea cucullata dorsum alabastri attingens. Perigonium videtur sanguineum; sepala oblongo-triangula. Tepala ligulata obtuse acuta. Gynostemium gracile. — Maxillariam platypetalam nisi Ruizianam tamen Lindleyanam non novi, quae nonnullis nobis quadrare videtur. Cum tamen cel. auctor procurrentem dicat simillimam platypetalae, haec longe certe distat. Forests of the Andes at 6000'. 1849. 761. Jamieson!

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92. MAXILLARIA FLORIBUNDA Lindl. in Benth. Pl. Hartweg. p. 154. Aug. 1845:

Caule erecto ramoso prolifero, foliis ovato-oblongis acutis petiolis duplo longioribus, scapis numerosis aequalibus, vaginis scapi adpressis, acuminatis, suprema ovario longiore, sepalis acuminatissimis, labello oblongo trilobo callo oblongo excavato in medio, laciniis obtusis, intermedia carnosa longiore.

Folia 4—8" longa. Scapi tripollicares. Sepala fere 3" longa. Rami annotini imbricati. — In montibus Chuquirabambae.

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93. MAXILLARIA MERIDENSIS Lindl. Orch. Lind. p. 19. N. 100. 1846:

Caulescens ebulbis; vaginis foliorum scabris, foliis lineari-lanceolatis acutissimis, floribus axillaribus subsessilibus, bractea suprema flore duplo breviore, petalis acuminatis, labelli oblongi trilobi laciniis lateralibus brevibus, intermedia tereti carnosa, appendice ovata concava.

„On trees at the grounds near Merida, at the height of 6000' above the see. July. Flowers yellow." Nr. —)

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94. MAXILLARIA HERALDICA Rchb. fil. in v. Schl. B. Z. 1852. 763:

Caulibus validis dense squamatis, squamis basi a radicibus adventitiis pendulis appressis perforatis, pseudobulbis oblongis ancipitibus diphyllis, foliis lineari-ligulatis, apice bilobis, floribus in foliis inferioribus ramulorum axillaribus, pedunculis trisquamatis, mento abbreviato, perigonii carnosissimi phyllis externis oblongis, acutis, internis subaequalibus minoribus, brevioribus, labello obsoletissime trilobo, lobis lateralibus obtusangulis, medio producto, obtuso, callo pandurato seu oblongo ab ima labelli parte medium versus, gynostemio humili, androclinio valde immarginato, postice tamen papillis quibusdam ciliato-coronato, anthera conico-mitrata, glandula lineari-lanceolata.

Blüthen gelb, die seitlichen äusseren Hüllblätter tragen auf der unteren Hälfte eine rothe nach aussen in drei dicke Linien ausgehende Zeichnung. Daher der Name: drei Balken auf goldnem Grunde. Lippe rothbraun, Spitze gelb. So gross wie die der *Dicrypta Baueri* Lindl. Stängel spannenhoch. Aus Guatemala von Herrn Kammerrath Frege eingeführt.

95. MAXILLARIA SPILOTANTHA Rchb. fil. Bonpl. II. 17:

Caule gracili elongato, foliis lineariligulatis apice attenuato bilobis, sex pollices longis, medio pollicem dimidiatum latis, pseudobulbis oblongis ancipitibus raris, pedunculis gracilentis solitariis, vaginis 2 membranaceis acuminatis vix imbricantibus vestitis, bractea subaequali dimidium ovarium elongatum haud aequante, sepalis oblongis acutis, tepalis subaequalibus quinta parte brevioribus, labello a basi angusta cuneato ligulatolineari, medio utrinque undulato constricto, dimidio anteriori obscure pandurato, apice obtuse retuso, callo lineari obtuso a basi ad medium discum, gynostemio clavato, margine androclinii elevato oblique descendente, subtiliter denticulato, anthera dorso carinata.

Blüthen so gross, wie die der *M. variabilis* Bat., schwefelgelb, Lippe scharlachroth gefleckt. Caracas 5000'. Juni. Wagener.

96. MAXILLARIA GUAREIMENSIS Rchb. fil. Bonpl. II. 16:

Caulibus erectis, validis, vaginis foliorum distichis, ob laminas amissas retusis nitidis, fulvis, coriaceis membranaceomarginatis, pseudobulbis ovalibus compressis raris, foliis ligulatis oblique bilobis ceterum integerrimis, 6 pollices longis, prope pollicem latis, pedunculis exsertis, solitariis plurisquamatis, squamis vaginantibus, carinatis, acutis, imbricantibus, sepalis oblongis acutis, tepalis subbrevioribus, latioribus, labello angusto, obscure panduriformi retuso carnoso, callo lineariligulato a basi ad medium, gynostemio crasso, limbo carinato obliquo, androclinii fundo elevato.

Blüthen schwefelgelb, so gross, wie die der *M. crassifolia*. Die glänzenden, wie lackirten Fruchtknoten zeichnen die Art sehr aus. Caracas. Wagener.

Var. purpureovinosa. Rchb. fil. Bonpl. III. 217. Blüthe dunkelrothweinfarbig mit kleinen dunkeln Flecken. Herr Geitner führte diese Form aus Caracas ein.

97. MAXILLARIA DENSIFOLIA Rchb. fil. [Bonpl.; II. 16. (Dicrypta) densifolia Endl. Pöpp. N. Gen. et Sp. I. p. 39. Tab. LXVIII.:

Caule erecto calamum aquilinum crasso, vaginis retusis micantibus vestito, foliis ligulato loratis, apice paulo (nec adeo ut in icone) attenuatis, inaequalibus, altero latere acutis, ultra pedalibus, duos prope pollices latis, pedunculis prope tripollicaribus, basi abscondite distiche imbricato squamatis, squamis lanceis acutis, superne 1—2 vaginatis, ovario nitidissimo cylindrico bractea sua longiore, mento rectangulo, sepalis oblongis apiculatis, tepalis subaequalibus, labello ligulato, medio

dilatato, nervis 3 mediis basi elevatis, callo obtusangulo in disco, gynostemio crassissimo.

Beide Arten entwickeln ihre Blüthen aus wesentlichen Beisprossen, welche hoch über der Achsel (selbst seitlich derselben) des zugehörigen Blattes sich finden.

98. MAXILLARIA ALBA L. O. 143. (*Dendrobium album* Hook. Ex. 142.)

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99. MAXILLARIA PLATYPETALA R. P. Syst. 221. Lindl. in Hook. B. J. I. 13:

Camino Real, on banks, at the elevation of almost 6000', upon the western declivity of the Andes, Colonel Hall.

100. MAXILLARIA PROCURRENS Lindl. in Ann. nat. hist. XV. 1845. p. 383:

Caulescens, pseudobulbis obovatis compressis diphyllis, foliis ligulatis subsessilibus, pedunculis solitariis squamoso-imbricatis, pseudobulbis longioribus, sepalis petalisque ovatis acutis, labello oblongo obtuso indiviso juxta basin callo oblongo aucto.

Popayan (Hartweg).

Very like M. platypetala.

Rchb. fil. in Bonpl. III. 216:

Caulis primarius curvato ascendens; portiones inter pseudobulbos bene abbreviatae a vaginis nitide brunneis arcte vestitae. Pseudobulbi oblongi ancipites diphylli; vaginae fulcientes non nisi infimae sub pseudobulbo laminigerae; juniores purpureo irroratae videntur. Folia ligulata, basi latiora, apice sensim quidem attenuata, sed bene latiora, quam in Maxillaria saxatili Rchb fil.; imo apice biloba fere quadripollicaria, duas tertias pollicis supra basin lata. Pedunculi rari uti in Maxillaria saxatili a vaginis distichis acutis carinatis vestiti, bractea tamen ampla ovarium aequante. Sepala oblonga acuta. Tepala paulo latiora. Labellum ovatum, brevius, latius, quam in M. saxatili Rchb. fil., ante basin utrinque plicatoundulatum, callo baseos breviori, trisulcato. Gynostemium gracile, clavatum. Color atropurpureus? Juxta specimen Hartwegianum.

101. MAXILLARIA SAXATILIS Rchb. fil. in Bonpl. III. 216:

Affinis platypetalae Rz. Pav. et procurrenti Lindl.! pseudobulbis distantibus, foliis lineari-ligulatis apice coarctatis inaequalibus, labello ligulato medio valde obscure trilobo, microscopice denticulato antice retuso, callo tumido a basi in medium.

Caulis calamum anserinum crassus. Vaginae arcte distichae ob laminas dejectas retusae brunneae nitidae membranaceomarginatae ultra lineam longitudinalem fuscam. Folia pergamenea lineariligulata, quadri—quinquepollicaria, dimidium pollicem lata apice attenuata, inaequalia, subbiloba cum mucronulo. Pseudobulbi rari oblongi ancipites diphylli (ex cicatricibus). Pedunculi rari vaginis ancipitibus onusti. Ovarium longe exsertum. Perigonium illi Maxillariae tenuifoliae aequale. Mentum modicum. Sepala oblonga acuta; lateralia basi ima connata hinc quasi saccum referentia. Tepala breviora, paulo latiora. Labellum supra descriptum; ubi siccum quasi subvelutinum ob cellulas acutiusculas. Gynostemium gracile clavatum. — Color ochraceus? Peru. Prov. of Chachapoyas. Rechs· (Certe Matthews?) (Herb. Boiss.)

102. MAXILLARIA PAMPLONENSIS Lind., Rchb. fil. in Bonpl. II. 281:

Affinis Maxillariae platypetalae Rz. Pav. et procurrenti Lindl.! pseudobulbis ovatis distantibus, diphyllis, foliis lineariligulatis apice obtuse et inaequaliter bilobis, labello medio trilobo minutissime serrulato, callo ante basin depresso, lobo medio antice valde carnoso.

Rhizoma scandens vaginis distichis nervosis apice ob laminas dejectas retusis tectum. Rami novelli foliis distichis nunc brevilaminatis insignes. Flores solitarii in foliis evolutis axillares. Mentum modicum. Sepala oblonga apiculata. Tepala late cuneata acuta. Gynostemii clavati androclinium velutino limbatum: discus androclinii carinatus: anthera velutina. — Blüthen innerlich goldgelb, äusserlich roth. Blüthen wenig grösser, aber fleischiger, als die der Maxillaria variabilis Bat. Diese besitzt spitze Scheiden ohne Blattplatten, schmale einblättrige Pseudobulben u. s. w. Pamplona: la Baja. 8000'. Januar. Nr. 1175. Schlim.

103. MAXILLARIA PRAETEXTA Rchb. fil. Bonpl. II. 16:

Caule abbreviato, pseudobulbos ellipticos ancipites imbricantes gerente, summis pseudobulbis foliigeris, foliis oblongoligulatis, basi paulo attenuatis, apice attenuato bilobulis, pseudobulborum vaginis arpophyllaceis, pedunculis solitariis abbreviatis pollicaribus, vaginis distichis paleaceis acuminato falcatis vestito, bractea subaequali duplo ampliori ovarium aequante, sepalis lanceolatis acutis, tepalis paulo brevioribus subaequalibus, labello ima basi vix lineam longo lineari unguiculato, dein statim pandurato acuto, callo lineari apice bilobo in basi unguis, ipsa lamina nuda, gynostemii androclinio margine brevissime tricorni Ornithidiorum more.

Blüthen so gross, wie die der M. melina, grüngelb, Lippe purpurn eingefasst vor dem Rande. Blätter bis über 2 Zoll lang, in der Mitte $^3/_4$ Zoll breit. Carabobo. 5000'. Februar. Wagener. — Rchb. fil. Xenia I. p. 23. Taf. X. I. 1. 2.

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04. MAXILLARIA ACERVATA Rchb. fil. in Bonpl. III. 217:

Affinis M. variabili Bat., ramis primariis abbreviatis, pseudobulbis ligulatis ancipitibus congestis, foliis lineariligulatis apice retuso bilobo emarginatis, labello pandurato ante basin callo triangulo depresso aucto.

Caules tri—quadripollicares dense vaginati. Vaginae asperulae. Pseudobulbi pollicares, sicci tres lineas lati. Flores illis Maxillariae variabilis Bat. aequales. Mentum modicum. Sepala triangula. Tepala linearia acuta. Gynostemium clavatum. Perigonium virens. Labellum purpureum apice flavum. Gynostemium purpureo punctatum. Ad Surrungnes in Costarica. Oersted.

105. MAXILLARIA PONERANTHA Rchb. fil. Bonpl. II. 17:

Caule stricto, subgracili, polyphyllo, vaginis abbreviatis, laminis oblongis inaequalibus bilobis, abbreviatis, pseudobulbis ovatis ancipitibus diphyllis, pedunculis solitariis basi bivaginatis, vaginis acutis, imbricantibus, bractea subaequali ovarii pedicellati nec dimidium aequante, obtusiuscule acuta, sepalo summo ligulato acuto, lateralibus triangulis acutiusculis majoribus, tepalis ligulatis acutis sepalo summo aequalibus, labello lineariligulato medio obscure et obtuse trilobo, apice retuso bilobo, gynostemio gracili postice acuto.

Blätter kaum 1 Zoll lang, $^1/_4$ Zoll breit. Pseudobulben einen Zoll lang, auch etwas mehr. Blüthe wenig kleiner als bei voriger Art, gelb mit rothen Fleckchen. Caracas. Warscewicz.

106. MAXILLARIA VARIABILIS Bat. Bot. Reg. XXIII. 1837.! sub 1986:

Caulescens, pseudobulbis ovalibus compressis squamis membranaceis longioribus monophyllis, foliis lineari-ligulatis obtusis emarginatis planiusculis, floribus axillaribus solitariis, sepalis linearioblongis acutis, petalis subaequalibus, lateralibus basi parum productis, labello oblongo retuso carnoso basi membranaceo venoso medio utrinque contracto, callo disci parvo ovato obtuso integerrimo, columna clavata, anthera pubescente.

Mexico, in various collections. Flowers small, deep purple. Known in the gardens under the names of M. atropurpurea and M. concinna. Near M. platypetala.

Huc: *Maxillaria Henchmanni* B. M. 3614. (XI. N. S.).

Pusilla, caulibus elongatis squamosis pseudobulbiferis, pseudobulbis ovali-oblongis compressis laevibus, folio solitario lineari-ligulato, pedunculis unifloris pseudobulbo longioribus, petalis sepalisque erectis oblongis acutis, labello erecto oblongo obscure trilobo, lobo terminali integerrimo.

Comm. by Mr. Henchmann from the Clapton Nursery. It was imported from Mexico by that gentleman.

Perigonium brunneoviolaceum.

MAXILLARIA VARIABILIS Bat. var. UNIPUNCTATA Lindl. Bot. Reg. XXIV. 1838. Misc. 26:

Caule ascendente, squamato, pseudobulbis ovalibus compressis monophyllis, foliis ligulatis obtusis apice oblique emarginatis, floribus solitariis, pedicellis pseudobulborum longitudine, sepalis lineari-oblongis acutis subaequalibus, lateralibus basi parum productis, petalis conformibus paulo brevioribus, labello oblongo retuso obsolete trilobo apice carnoso; glandula succulenta sanguinea obtusa in medio.

Received by the Horticultural Society in March 1837, by Sir Charles Lemon, Bart. in whose collection it flowered in January 1838.

Flowers deep yellow, shaded with a faint greenish tinge. Labellum threelobed, the middle one about the length of the petals, but a good deal broader with a roundish spathulate recurved point, slightly indented in the centre; lateral lobes very small, their edges curved outwards and having in the hollow between them, which is of a brownish yellow, a roundish oblong reddish tubercle, extending towards the base of the column, which is marked with several deep red spots. The plant was sent to the Hort. Soc. of London from Mexico, by Mr. Hartweg, their collector in that country and was found in the neighbourhood of Vera Cruz. I have also had it from the very rich coll. of Thomas Harris Esq. of Kingsbury. It is scarcely more than a yellow flowered var. of Max. variabilis.

Huc: *Maxillaria angustifolia* Hook. Ic. IV. 1841. 348:

Pseudobulbis proliferis oblongis laevibus vetustis subsulcatis, pedunculis bulbo longioribus unifloris, sepalis petalisque conformibus oblongis, labello oblongo obscure trilobo disco tuberculo oblongo, lobo medio ovato.

Mexico. Parkinson Esq.

Sent by Mr. Parkinson to Woburn 1838. The pseudobulbs rise one above another in a proliferous manner and are more or less sheathed with membranous brownish scales. The singleflowered peduncles spring solitary from the base of each pseudobulb. The perianth is of a tawny yellow colour, the labellum of a deeper tint.

Huc: *Maxillaria revoluta* Klotzsch Berl. Allg. Gartenz. 1852. p. 186:

Caulibus squamosis pseudobulbiferis, pseudobulbis oblongis compressis laevibus, apice unifoliatis, folio lineari-ligulato erecto subtortuoso unicostato, apice obtuse emarginato, basi conduplicatim attenuato, pedunculis unifloris pseudobulbo duplo longioribus; flore vitellino, perigonii foliolis exterioribus oblongis erectis brevissime acutis, marginibus lateralibus brevi recurvis, interioribus brevioribus, apice revolutis, labello erecto obtuso subtrilobo, lobo antico supra puberulo, lateralibus brevibus erectis late rotundatis, appendice linguaeformi atropurpurea adnata ad basin inter lacinias laterales; gynostemio erecto brevi semitereti virescente glabro, dorso obtuso; germine longissimo tereti striato.

107. MAXILLARIA PURPURATA Rchb. fil. Mss. Huc: *Camaridium purpuratum* Lindl. Orch. Lind. p. 22:

Foliis distichis linearibus coriaceis obtusis emarginatis inaequalibus, floribus solitariis axillaribus foliis parum brevioribus bracteis multo longioribus, sepalis petalisque oblongis, labello ovato obtuso utrinque emarginato callo maximo oblongo disci verrucisque plurimis minimis circumstantibus.

„An epiphyte with white flowers and a purple lip, from the province of Merida, at the height of 5000'. Juni." Nr. 635. Near C. arbuscula, but the leaves are longer and slenderer, the flowers stand far above the bracts and the lip is quite different in its callus and minute surrounding warts.

Obs. Nescio num huc pertineat, seu ad sequentes. Pseudobulbos non habeo.

† † Caules ebulbes.

* Caulis robustus brevis compactus foliis bene carnoso coriaceis.

108. MAXILLARIA ALPESTRIS Lindl. in Benth. Hartwg. 154. Aug. 1845:

Acaulis ebulbis, foliis distichis densissimis ovalibus patentibus sessilibus, scapis foliis aequalibus vaginis acutissimis suprema ovarii longitudine, sepalis angustis acutissimis, labello ovali obtuso utrinque emarginato intus aphthoso, linea angusta sulcata elevata in medio.

Folia sesquipollicaria. Sepala vix pollicaria. Habitat inter Lichenes in montibus Loxa rarissima.

* * Caulis gracilis elongatus foliis pergameneo-papyraceis optime distichis.

109. MAXILLARIA GRAMINIFOLIA Rchb. fil. Mss. Huc: *Camaridium graminifolium* Rchb. fil. Linn. XXII. 857. Cf. Walp. Ann. III. 544.

Isochilus graminifolium Humb. B. Kth. — Lindl. Bot. Reg. XXVII. 184. sub 1:

Vaginis imbricatis, foliis distichis lineari-lanceolatis acutissimis, floribus solitariis bractea acuminata, pedunculo breviore, sepalis aristatis, petalis conformibus duplo brevioribus, labello lineari oblongo utrinque emarginato basi callo magno duro oblongo, columna petalis duplo breviore.

When not in flower undistinguishable from Isochilus grandiflorum. It is well figured in Humb. Bonpl's. work, excepting the analysis, in which the form of the labellum is inaccurate, and the presence of a hard oblong callus, called a purple stain in the disk by Mr. Kunth is overlooked. Peru, Mathews. 1064. Trunks of trees near Lloa: Jamieson. (Herb. propr. et Hooker).

En nova diagnosis juxta typos:

Caule vaginis emarcidis striatis tecto, superne fasciculato ramoso, foliis linearilanceis acuminatis apice inaequalibus seu bidentatis limbo minute sub lente scabridis, floribus parvulis ex vaginis vetustis, bractea acuminata ovarium aequante seu superante, mento subnullo, sepalis lanceis acuminatis, tepalis paulo brevioribus, labello elliptico subacuto, lateribus anticis repandulo ac paulo attenuato, callo oblongo lato in dimidio inferiore (sicco) toto nigro, androclinii limbis lateralibus de fundo elevato descendentibus.

In declivitate Andium Popayanensium, nemoribus opacissimis inhorrescentium, juxta villam La Erre, ad radices Paramida Puruguay, alt. 1064 hexap. florens Novembri. Humboldt!

110. MAXILLARIA MATTHEWSII:

Caule vaginis emarcidis lucidis striatis tecto superne (an semper?) simplici, foliis linearibus acuminatis valde brevibus apice sub lente minute scabridis, floribus quam in praecedente majoribus, bracteis obtusatis ovario pedicellato bene brevioribus, subaequalibus, labello late oblongo apice retuso cum apiculo parvo, utroque latere medio auriculato praeter callum oblongum a basi in medium discolore, portione postica viridi, antica flava, columna utrinque angulo antico acutangula.

„*Isochilus graminifolium* Hb. B. K." Lindl. Bot. Reg. XXVII. 184. sub 1. ex p. Peruvia 1064. Matthews! (Herb. propr.).

111. MAXILLARIA POLYPHYLLA.

Caule vaginis emarcidis reticulatis tecto, hinc a basi ramoso, foliis linearilanceolatis, apice inaequali apiculatis aristatisve microscopice scabridis, floribus illis praecedentis aequalibus, bracteis oblongis acuminatis dimidio ovario pedicellato aequalibus, pluribus in axillis foliorum, aliis in axillis vaginarum jam aphyllarum, mento subnullo, sepalis oblongis acuminatis, tepalis ovatis acutis, labello oblongo apice retusiusculo apiculato, utroque latere emarginato, praeter baseos callum oblongum tumidum concolori flavo, columna utroque angulo superiori obtusangula.

„*Isochilus graminifolium* Hb. B. K." Lindl. B. Reg. XXVII. 184 sub 1 ex p. Pichincha Jameson! (Herb. propr.).

112. MAXILLARIA LANCIFOLIA:

Caule vaginis punctulato striatis tecto, a basi (semper?) simplici, foliis linearilanceis apice inaequali acuminatis, minute scabridis, floribus illis praecedentium aequalibus, mento subnullo, bracteis acuminatis, ovaria pedicellata excedentibus, sepalis triangulo acuminatis, tepalis subaequalibus subbrevioribus, labello hexangulo, latiuscule oblongo, apice breve triangulo, basi breve obtriangulo, lateribus medianis elongatis sinuato, callo oblongo lato antice emarginato, marginibus lobulato a basi apicem versus, toto labello apice excepto obscure atroviridi (sicco!), columnae angulis anticis obtusatis.

Camaridium lancifolium Rchb. fil. Linnaea XXII, p. 857. Walp. Ann. III. 544. Merida. 6500' fleurs blanches. Label violet. Funck und Schlim. 7311 (Hb. sicc.)

113. MAXILLARIA CASSAPENSIS:

Caule vaginis striatis punctulatisque vaginato, sursum ramoso, foliis lanceolatis acutis apice inaequali apiculatis, microscopice scabridis, floribus illis praecedentium bene majoribus, bracteis acuminatis ovaria pedicellata subaequantibus, mento conspicuo, sepalis oblongotriangulis acuminatis, tepalis subaequalibus, subbrevioribus, labello trilobo, lobis lateralibus obtusangulis seu retuso obtusangulis, lobo antico oblongo acutiusculo seu late rhombeo, callo oblongo a basi in discum, dimidio labelli postico obscuro (atroviolaceo?), antico flavido, columnae angulis anticis bene obtusatis.

Peruvia in rupium fissuris ad Cassapi et Cuchero. Septb. 1828. Pöpp.! (Hab. sicc.) Hac in specie optime et saepius vidi apparatum pollinicum, omnino cum illo reliquarum Maxillariarum quadrantem.

114. MAXILLARIA LUTEORUBRA:

Caule vaginis nervosis ac subtiliter transverse striolatis tecto, a basi hinc ramoso, foliis lanceolatis apice inaequali acuminatis limbo minute scaberulis, floribus illis praecedentis majoribus, bracteis oblongolanceolatis obtuse acutis ovario pedicellato dimidio brevioribus seu idem

superantibus, mento conspicuo, sepalis triangulis acuminatis, tepalis paulo brevioribus, labello trilobulo, lobis lateralibus elongatis ante medium obtusangulis, hinc repandulis, lobo antico oblongo seu transverse triangulo lateribus obtusangulo antice acuto, tota portione postica ultra basin lobi antici obscura (atroviolacea?) medio vernixia (ac incrassato callosa?), in basi lobi medii rugis transversis striolata.

Isochilus grandiflorum Lindl. Bot. Reg. XXVII. 1841. sub 1:

Vaginis imbricatis, foliis distichis linearilanceolatis acutissimis, floribus solitariis axillaribus, bractea acuminata sepalorum dimidio aequali, sepalis acuminatissimis, petalis duplo brevioribus conformibus, labello linearioblongo utrinque emarginato basi nudo, columna petalis parum breviore.

Very like I. graminifolium, but the flowers are 4 times as large, independently of the distinctions included in the foregoing characters. Good specimens exist in the Royal Herb. of Munich coll. in Peru by Hänke, but I find nothing like in the Reliq. Haenk.

Huc: *Camaridium luteo rubrum* Lindl. Orch. Lind. 1846. N. 114. p. 22:

Caule simplici, foliis distichis lanceolatis apiculatis, floribus solitariis, bracteis ovario brevioribus, sepalis acuminatis, petalis acutis, labello oblongo obtuso undulato emarginato medio constricto, callo magno in discum.

„Epiphyte. Forests in the neighbourhood of Merida, at the height of 5500'. Sept. Flowers yellow, with a deep red lip." Nr. 633. This species is very near C. brevifolium, but its leaves are longer and narrower, its flowers are smaller, and extend considerably beyond the bracts. The lip also appears to be more distinctly threelobed and wavy.

Obs. Utrumque typum bene inspexi. Specimen Lindenianum ipse habeo. Specimina sub hoc nomine a Musaeo Berolinensi distributa sub 1072 seu 1073 a Moritzio lecta, (nunc cum Maxillaria brevifolia commixta) mihi dubia. Huc essent referenda, sed labellum reperio emarginatum ut in Maxillaria longibracteata. Specimina haud bona, unde res haud liquet. Rchb. fil.

115. MAXILLARIA LONGIBRACTEATA. Huc: *Camaridium longibracteatum* Lindl. Benth. Pl. Hartw. p. 154 (Aug. 1845):

Foliis ovato-oblongis apiculatis, vaginis pedunculorum acuminatissimis suprema ovarii longitudine, sepalis acuminatis, petalis lanceolatis apice revolutis, labello oblongo medio constricto axi calloso apice emarginato. Caules sesquipedales, folia tripollicaria. Sepala semipollicaria.

In Cordillera prope Loxa.

116. MAXILLARIA BREVIFOLIA:

Caule simplici seu ramoso vaginis nervosis ac rugulosis (arpophyllaceis) vestito, sursum dense folioso, foliis lineariligulatis apice inaequali apiculatis, limbo puberulis, valde abbreviatis, floribus illis praecedentium aequalibus, bracteis oblongolanceis acuminatis ovariis pedicellatis praecedentium aequalibus, mento bene evoluto, sepalis ligulato triangulis acuminatis, tepalis paulo brevioribus, labello ligulato medio trilobo, lobis lateralibus obtusangulis haud productis, lobo medio ligulato obtuse acuto, callo magno ligulato tumido a basi in discum, portione inferiore obscura (atroviolacea?), antica pallida (flavida (?)

Huc: *Camaridium brevifolium* Lindl. Benth. Pl. Hartw. p. 154. Aug 1845:

„Foliis oblongis acutissimis canaliculatis, vaginis pedunculi angustis acuminatis, sepalis petalisque acuminatissimis, labello oblongo medio

constricto axi calloso apice obtuso. Caules sesquipedales vel minores. Folia sesquipollicaria et ultra. Sepala semipollicaria.

In montibus Loxa."

Obs. Specimina mea: Merida Moritz 1072. 1073. (Specimina bene videntur confusa. Confer supra sub *M. luteorubra*). — „*Camaridium luteo rubrum*." S. Martha. Purdie. Comm. ill. Lindley! — Rchb. fil.

1407/4. c. CAMARIDIUM *Lindl.*

Bot. Reg. X. 1824. 844.

Perigonium resupinatum explanatum sepalis liberis. Labellum liberum sessile cucullatum trilobum. Columna teres. Gynizus fornicatus. Pollinia parallela, compressa, filo sub anthesi nullo.

Distinguished from Ornithidium by not having the labellum united with the base of the column, nor a connivent perianth, nor a fleshy disc to the labellum.

1. CAMARIDIUM OCHROLEUCUM Lindl. l. c. *Cymbidium ochroleucum* L. O. 168. Huc: *Ornithidium album* Hook. Bot. M. 3306:

Floribus sessilibus, perianthii laciniis oblongis obtusis (albis), labello trilobo medio obtuso disco glanduloso, glandula rugosa basi setosa.

Trinidad.

Huc mihi videtur pertinere, sed non eadem planta:

MAXILLARIA LUTESCENS Scheidw. Allg. Gartenz. 1839. 145:

Caule folioso apice bulbifero, pseudobulbis oblongis ancipitibus, rugosis, monophyllis, foliis ensiformilanceolatis, apice obliquis, emarginatis, basi conduplicatis, carinatis, coriaceis, floribus axillaribus, fasciculatis, pedunculis vaginatis, unifloris pseudobulbis aequalibus, bracteis vaginisque membranaceis amplis, sepalis conniventibus, linearilanceolatis, margine revolutis, acutis, lateralibus basi connatis, petalis parum minoribus angustioribus, labello sepalis duplo breviori cucullato trilobato, lobis lateralibus verticalibus, obtusis, intermedio longiore carnoso recurvo hispido, margine crispato, callo magno piloso; columna clavata, arcuata, anthera membranacea, triangulari cristata, uniloculari, polliniis 4 inaequalibus parallele dispositis, glandula lunata. — Flores ochroleuci odorati. Trinidad.

Folia sex pollices longa, unum lata. Flores in basi pseudobulbi, utrinque quaterni, pseudobulbis longiores. Pedunculi 4—5 squamati. Sepala et tepala a basi in medium flava, basi subalbida. Labelli lobi laterales albidoflavi, purpureo limbati. lobus medius aurantiacus. Callus pilosus purpureo striolatus. Columna subtiliter striolata.

2. CAMARIDIUM ALATUM Lindl. in Benth. Pl. Hartw. p. 153:

Foliis ovalibus obtusis integris, labello oblongo obtuse trilobo intus piloso, apice carnoso, columna dorso carinata, capsulae triangularis angulis alatis.

C. ochroleuco habitu simile, sed labello et fructibus omnino diversum. In arboribus nec non in terram in montibus. Loxa.

3. CAMARIDIUM ARBUSCULA Lindl. in Benth. Pl. Hartw. p. 153.

Caule rigido erecto, foliis linearibus rigidis emarginatis, pedunculis bivaginatis, sepalis ovatis, petalis oblongis obtusis, labello oblongo obsolete trilobo emarginato medio convexo. Folia vix 2pollicaria.

In montibus Loxa.

Obs. Totum genus me judice nullum praebet characterem et erit quando delendum, seu pro specie 1. retinendum, quae forsan arctiorem characterem praebebit

Camaridia reliqua Lindleyana sub Maxillariis reperienda sunt. Speciem tertiam vidi in herbario Ill. Lindley. Sed nil habeo, nisi analysin ill. Lindley. Forsan est Maxillaria mea arbuscula Bonpl. 1856. IV. 213, sed vix crediderim, nam notassem. Tamen ex icone Lindleyana mea flos tantum recedit androclinio ciliato ac labelli apice non emarginato et mento humiliori. Rchb. fil.

1407/1. STENIA *Lindl.*

Bot. Reg. XXIII. 1837. sub f. 1991. XXIV. 1838. t. 30.

Perianthium explanatum subaequale, sepalis lateralibus basi obliquis. Labellum cum basi columnae continuum (indivisum) concavum, disco appendiculatum. Columna semiteres, basi producta, apice rotundata mutica. Anthera bilocularis. Pollinia 4, linearia, geminata, basi sejuncta, dorsalia minima; caudicula subquadrata acuta pubescens. Herba acaulis, ebulbis. Folia oblonga, basi angustata, apice recurva. Flores solitarii radicales, basi ovarii bracteolati.

1. STENIA PALLIDA Lindl. Bot. Reg. l. c.:

Caulis nullus, nec rhizoma conspicuum, nec pseudobulbus. Folia 2—5, oblonga, acuta, avenia, basi paulo angustata et carinata, e squamis spathaceis brunneis vaginantibus erumpentia, textura rigido-chartacea. Scapi radicales prostrati, uniflori, apice bracteis duabus oppositis ovatis instructi, ovario breviores, saltem haud longiores. Perianthium explanatum, pallide citrinum, diametro sesquiunciali et ultra; sepalis petalisque aequalibus ovatis, lineatis, acutis. Labellum saccatum, integrum, carnosum, ovatum, cum pede producto columnae continuum, pallide citrinum, rubro punctatum, crista transversa dentata. Columna semiteres, clinandrio proclivi, facie pubescens. Pollinia 4, linearia, obtusa, dorsalia minima, caudiculae brevi villosae adnata, glandulae rhomboideae cartilagineae medio insertae.

Demerara imp. by Mr. Barker of Birmingham. It differs from Maxillaria in the labellum not being articulated with the foot of the column, a distinction the importance of which there is at present no cause to suspect. In general app. it is like Maxillaria Rollisoni.

Rchb. fil. Bonpl. II. 15. Caracas. 6000'. August bis October. Selten. Wagener.

1407/2. CHRYSOCYCNIS *Lind. Rchb. fil.*

Bonpl. II. 280.

Affinis Trigonidio Lindl., diversa labello carnoso anguste ligulato naviculari, basi inferiori sulcato, apice acuto inflexo, basi utrinque auricula rotunda divaricata aucto; gynostemio gracili arcuato superne clavato; polliniis Trigonidii sessilibus in caudicula teretiuscula basi in glandulam hippocrepicam exeunte.

1. CHRYSOCYCNIS SCHLIMII Lind., Rchb. fil. in Bonpl. II. 280:

Caulescens: caulis validus calamum aquilinum crassus squamis vestitus hinc pseudobulbosus. Pseudobulbi ancipites ovati (sicci rugulosi). Folia oblonga acuta brevissime petiolata superne vernixia nervulis transversis (in sicco) arpophyllacea, inferne violacea. Pedunculi in squamis fultientibus axillares, tenues, paucivaginati. Flores majores, illos Trigonidii obtusi aequantes. Perigonium patens. Sepalum summum oblongum acutum fornicatum; sepala lateralia oblonga, acuta, latere externo extrorsum curvata; deflexa. „Perigonium flavum brunneo aspersum. Labellum rubroflavum. Gynostemium albidum viridi striatum."

Ocanna in Wäldern. August. 8000'. Nr. 28. Schlim.

Rchb. fil. Ill. 67. (calami lapsu: *Chrysocycnis Trigonidii* Lind. Rchb. fil.) Alto de San Pedro 7000'. Epiphyt. Wagener

1407/4. CHEIRADENIA *Lindl.*

Fol. I. Febr. 21. 1853:

Sepala herbacea, patentia; lateralibus pedi producto columnae adnatis; petala conformia, labellum indivisum, planum, cum pede columnae articulatum; linea mediana elevata, lamella intramarginali digitata. Columna brevis, semiteres, mutica, pede longo lineari. Stigma circulare. Pollinia 2, solida in caudiculam ovalem sessilia; glandula ?. — Herba epiphyta, Guayanensis, muscicola, acaulis. Folia membranacea, nervosa. Pedunculi filiformes, pauciflori, parce vaginati. Flores parvi, herbacei.

The adhesion of the lateral sepals to the extended foot of the column, the spurless lip, and other characters seem to refer this to the Maxillarideous herd, as well as the stemless bulbless habit. Its true station would seem to be near my Zygopetalum gramineum, which is by no means the plant so called by Mr. H. G. Reichenbach, and those Warreas which form the same author's genus Warczewiczella. But the solid undivided pollen-masses, peculiar lip and habit, are essentially different.

1. CHEIRADENIA CUSPIDATA Lindl.

A stemless bulbless plant, from three to four inches high. Leaves a few, radical, obovate, membranous, slightly ribbed, spreading, drawn to a fine slender recurved point. Peduncle filiform, with two or three spreading distant acuminate vaginae, bearing one to three drooping flowers at the point. Sepals and petals ovate, acute. Lip membranous, obovate, very obscurely three-lobed, with an elevated line along the middle, and a thin intramarginal lamina, divided into five equidistant teeth. There are no flowers upon my specimens of Leprieur's 114, but I think it is the same as 108, which I have examined. My thanks are due for both to the Administration of the Museum of Natural History at Paris.

Wild in French-Guyana.

1407/5. CHAUBARDIA *Rchb. fil.*

v. Schl. und Mohl B. Z. 1852. 671.

Perigonii membranacei phylla 5 lanceolata, acuta, externa margines internorum vix imbricantia, lateralia ima basi connata. Labellum a crista gynostemii basin anteriorem descendente per raphen phyllorum lateralium externorum dilatatum in laminam utrinque extrorsum obtusatam subcorneam excavatulam nervis quinque cristularum instar elevatis; dein explanatum in laminam valde membranaceam, omnino cum parte basilari non articulatam, trilobam; lobi laterales divaricati, semifalcati, parvi, lobus medius obtuse rhombeus, longe maximus; cristae illae baseos laterales externae simulatque descendentes hanc in laminam erectae, auctae, dentiformes, quasi bifidae duas in laminas altera interna oblonga apice libero acutiuscula, erecta, altera lateralis, dentiformis, prostrata; cristulae similes pusillae in lobis lateralibus dentiformibus supinae. Gynostemium breve, crassum, lateribus et dorso obtusissimum, papillosum. Androclinium triangulum submarginatum, rostellum retusum. Alae duae obtuse triangulae, carnosae, angulo libero in basi inferiori descendentes, ab angulis androclinii anticis involutae (?ex sicco), ad gynostemii medium, dein margines anteriores carinati; basi ima connati cum basi phyllornm lateralium internorum, carina a media basi in cristam excurrens per rhaphen phyllorum lateralium externorum, pro labelli basi recipienda. Stigmatis fovea transversa, linearis, minuta; sub rostello abscondita. Anthera —. — Epiphyta ebulbis, habitu

Kefersteiniarum, foliis oblongo lanceolatis cuneatis, acuminatis, membranaceis. Pedunculi capillares, uniflori, flores illos Cyrtoperae Woodfordi non aequantes.

Genus ob labellum cum gynostemio haud articulatum, tamen non apus, Steniae quodammodo affine visum dicavi ill. Chaubard de flora europaea meritissimo.

1. CHAUBARDIA SURINAMENSIS:

Vom Herrn Universitätsgärtner Kegel entdeckt bei Geiersvlyt in Surinam. Jedenfalls im Van Houtteschen Garten.

1410. TRICHOCENTRUM *Pöpp. Endl.*

Nov. Gen. et Sp. Pl. II. 2. — Lindl. Bot. Reg. XXVI. 1951. haec:

Perianthium patens, liberum, aequale. Labellum sessile cum basi columnae connatum, planum, bilobum, basi lamellosum. Columna nana, semiteres, crassa, utrinque alata. Anthera bilocularis, mutica, pollinia 2, complicata; caudicula cuneata; glandula minuta. — Herbae epiphytae americanae acaules, foliis planis (aut nullis?); floribus radicalibus.

A. Folia equitantia.

1. TRICHOCENTRUM IRIDIFOLIUM G. Lodd. in litt. Lindl. Bot. Reg. 1838. XXIV. Misc. 178:

Foliis distichis linearilanceolatis carnosis, labello ovali obtuso indiviso basi bilamellato, columnae alis parvis obtusis integris.

A small species with pale yellow flowers having the lip delicately streaked with darker yellow. It was imported by Mssrs. Loddiges from Demerara.

2. TRICHOCENTRUM PLECTROPHORA Rchb. fil. Mss. Huc: *Plectrophora iridifolia* Focke Tidsch. Wis. Nat. Wetsch. I. 1848. 212:

Perianthium connivens, sepala lineari oblonga carinata, in acumine attenuata, patula; lateralia in calcar tubulosum rectum subcompressum attenuata 2 cent. longum decurrentia, 17 mill. longa, 5 lata. Petala majora, oblongo obovata, apice rotundata, minutissime apiculata, plana, labello incumbentia, 2 cent. longa. Labellum magnum, orbiculatum, cucullatum basi acutum, columnam involvens, vitellino aurantiaco striatum striis elevatis apice furcatis, disco bilamellato, lamellis basin versus elevatioribus apice divergentibus. Columna nana, in ovarium resupinata, clinandrio biaurito, anthera globosa bilocularis, subcarnosa albida, pollinia 2 oblongo obovata, compressa, in caudicula erecta, flava. Caudicula linearis, pollinia versus cuneata, dilatata. Glandula minuta ovalis. Ovarium triquetrum trialatum. Flores lutei. Herba epiphyta habitu Oncidii iridifolii. Folia disticha, ensiformia, equitantia, subcarnosa, demum pseudobulbum formantia. Pedunculus foliis brevior 1—2 florus, axillaris.

Aprili. Surinam ad Boven Commewijne.

B. Folia plana.

a. Calcar nullum.

3. TRICHOCENTRUM CANDIDUM Lindl. Bot. Reg. 1843. Misc. 18:

Bracteis ovatis acutis, sepalis petalisque ovatis acutis, labello oblongo emarginato basi obsolete bidentato ecalcarato, gibboso, columnae alis ovatis acutis, anthera villosa.

Guatemala.

b. Calcar manifestum.

4. TRICHOCENTRUM RECURVUM Lindl. Bot. Reg. XXIX. (1843.) Misc. 17:

Bracteis distichis cucullatis ovatis acutis, sepalis petalisque ovatis acutis, labello oblongo basi purpureo bidentato, calcari recurvo ovarii longitudine, columnae alis cuneatis denticulatis, anthera pubescente.

A Guyana plant, imported by Mrrs. Loddiges. It resembles Trigonidium in habit, but is smaller. The lip is white, with a deep purple spot at its base; afterwards it changes to pure yellow. The spur is long, and curved backwards and upwards, so as to arch over the back of the flower.

5. TRICHOCENTRUM FUSCUM Lindl. Bot. Reg. XXVII. (1835). 1951:

Foliis oblongis acutis oblique tortis racemo longioribus; labello glabro bilobo basi bilamellato venis quibusdam callosis, alis columnae serratis.

Acoidium fuscum Lindl. in Hort.

Mexico introd. by Mr. Knight of the Kings Road, Chelsea.

Labellum album purpura pictum calcare viridi, perigonium viridirubellum.

6. TRICHOCENTRUM PINELI Lindl. Gard. Chronicle 1854. 772:

Columnae alis truncatis denticulatis, labelli oblongi emarginati callis 2 linearibus oblique truncatis parallelis glabris dentibusque totidem uxta basin hirsutis, calcare pedicello subaequali apice uncinato.

Veitch. We have it in a wild specimen with a coloured drawing from our friend, the Chevalier Pinell, who found it near Rio. It is much like T. fuscum, but the wings of the column, the callous lines on the lip, and the peculiar spur, readily distinguish it. In Brazil the sepals and petals are cinnamon brown, the lip white with crimson freckles near the base, and the leaves are spotted with red, as in Oncidium Papilio, the live specimen was paler in all respects.

7. TRICHOCENTRUM PURPUREUM Lindl. Gard. Chron. 1854. 772.:

Columnae alis dolabriformibus denticulatis, labelli obovato oblongi emarginati callis 2 linearibus obtusis adjecto minore utrinque juxta apicem dentibusque totidem juxta basin glabris, calcare ovarii longiore crasso obtuso sub-falcato.

Veitch. The dull olive green sepals and petals of T. fuscum, but its lip is purple and its thick curved spur is peculiar. Like all others it is a stemless fleshy leaved epiphyte with little radical one- or twoflowered scapes. Said native of Demarara.

8. TRICHOCENTRUM TENUIFLORUM Lindl. Paxt. Fl. G. I. p. 12:

Foliis —, sepalis linearibus acutis, petalis conformibus obtusis, labello obovato, emarginato, subundulato, basi angustato, lamellis totam basin occupantibus, columnae alis semicordatis acutis.

Differs by its narrow sepals and petals of the small flowers and its almost linear obovate lip with a pair of plates occuping the whole of the base. Bahia. Flowers small, dingy brown, and white.

9. TRICHOCENTRUM MACULATUM Lindl. Orchid. Lind. 1846. p. 24. Nr. 127:

Foliis linearioblongis carnosis obtusis, bractea cucullata, sepalis petalisque oblongis obtusis, labello obovato bilobo obtusissimo medio bilineato, calcare longissimo, columnae alis carnosis truncatis dentatis.

„An epiphyte with very thick fleshy leaves, spotted with red. Flowers large with a very long spur; petals white, spotted with purple. Lip with a yellow crest. New-Granada, in the province of Rio Hacha, at the height of 4500', on old trees, on the border of the river San Antonio, in the Sierra Nevada of Sta Martha. Febr. 1844 N. 1066."

Rchb. fil. Bonpl. II. 250. Ocanna. Juli. Nr. 41. Schlim Blüthen grösser. als bei der ursprünglichen Form. Die Kiele gehen bei T. pulchrum Pöpp. Endl. bis auf

die Mitte der Lippe, während sie hier am Grunde sich finden: dies ist ziemlich der einzige Unterschied, den wir finden.

l. c. III. 67: Ocanna. März. 4000'. Wagener.

10. TRICHOCENTRUM PULCHRUM Pöpp. Endl. II. 11. Tab. CXV:

Perianthii resupinati sepala patentia, aequalia, libera. Labellum obovatum, sessile cum columnae margine anteriore connatum, basi in calcar longum attenuatum. Columna brevis, ob nexum cum labello cyathiformis, margine superiore utrinque longe ciliata. Anthera postica, ad medium pilosa, bilocularis Pollinis cereacei massae duae, caudicula communi bifida, operculo glandulae stigmatis rostrato.

Herba perennis, acaulis, speciosa, adhaeret arborum truncis radicibus parcis, filiformibus, teretibus, simplicibus, extus suberosis, intus carnosis, succulentis, albidis, digitum longis. Rhizoma nullum, sed squamae nonnullae vaginantes, truncatae, rigidae, laeves, nitidae, cinnamomeae, foliorum basin amplectentes floremque emittentes omni stirpis aetate persistunt. Folia pauca, duo vel tria, basi incrassata, cava, lamina oblonga, obtuse acuta, interdum mucronata, plana, uninervi, nervo supra impresso, subtus tenuiter carinato percursa, carnoso coriacea, obscure viridia, nitida, laevigata, pollices quatuor longa, pollicem unum lata. Flores radicales ima basi iisdem quibus folia circumdantur squamis cincta, vaginis duabus vel tribus in acumen lanceolatum desinentibus, semipollicaribus inferne inclusi, sessiles. Ovarium erectum leviter flexuosum, basin versus sensim tenuius, quadrangulare, angulis acutis, haud marginatis, tres fere pollices longum. Perianthium aperto campanulatum, magnum, colore candido et sanguineo varium, horizontale. Sepala libera, patentissima, invicem aequalia, ovali elliptica, sessilia, acutiuscula, dorso convexa, superiora haud carinata sola basi marginibus sibi incumbentia, tenuiter membranacea, disco multinervia, marginem versus costato venosa; supremum reliquis parum latius, magis concavum, dorso carinatum; inferiora labello haud supposita. Labellum erectum, obovatum, basi cuneatum, apice emarginatum, antice duplicato crenatum, membranaceum, lamellis carnosis adspersum, disco concavo, laevissimo, incrassato, margine calloso et anguloso superne valde prominente undique circumdato praeditum, lateribus reflexum, basi antice ope callorum disci marginalium cum columna concretum, in calcar cylindricum, longe attenuatum, acutissimum, vacuum, foramine pervium, ovarium fere adaequans elongatum. Columna labello fere triplo brevior, cum ovario continua, per margines anteriores labello adnata, inde cyathum fingens, in marginibus lateralibus horizontalibus ciliarum carnosarum planarum, aequalium serie simplici cristata, postice excavata pro anthera verticali, ovata, hemisphaerica, latere posteriore ad medium usque pube pilosa rigide obsessa, intus biloculari. Massae pollinis geminae cereaceae, caudiculae communi bifidae insidentes, nec sulcatae, neque bilobae. Operculum glandulam stigmatis cum caudicula jungens ovale, convexum, rostratum.

Crescit rarissime, semel tantum lectum, in arborum vetustarum truncis Peruviae orientalis ad praedium Pampayaco. Floret Julio.

Species exclusa.

TRICHOCENTRUM ? FUNALE Lindl. Bot. Reg. XXIII. 1837. sub 1950 = *Angraecum funale* Lindl.

1411. BIFRENARIA *Lindl.*

Bot. Reg. XXV. 1843. Misc. 67:

Sepala patula, libera, subaequalia; lateralia cum basi producta columnae connata. Petala sepalis duplo minora. Labellum cum pede columnae articulatum, cucullatum. Columna brevis, semiteres. Anthera subcristata Pollinia 4, per paria incumbentia, caudiculis duabus dis-

tinctis, glandula oblonga. Herbae epiphytae, pseudobulbosae. Folia terminalia, subsolitaria, plicata, cartilaginea. Pedunculi radicales, 1 flori, vel racemosi, saepius elongati.

I. Folia plana.

a. Uniflorae (raro bi-, imo triflorae).

1. BIFRENARIA ATROPURPUREA Bot. Reg. XXIX. 1843. sub Misc. 67. — Lindl. Orch. Nr. 1. *Maxillaria atropurpurea* Lodd. Bot. Cab. 1877;

Pseudobulbis ovatis obtusis, 4gonis, foliis oblongo-lanceolatis plicatis solitariis, racemis radicalibus 3-floris pseudobulbis paulo longioribus, labelli lobis lateralibus brevioribus divergentibus, intermedio transverso subtrilobo revoluto, suberoso, callo in medio antice tridentato.

Brazil.

Flowers dark purple, very sweet scented.

2. BIFRENARIA PARVULA Rchb. fil. Mss. Huc: *Maxillaria parvula* Hook. Exot. Fl. t. 217. (1827). Huc porro pertinebit — me saltem judice — planta, de qua egit ill. Lindley in Bot. Reg. 1841. XXVII. Misc. 142:

MAXILLARIA PURPURASCENS Knw. et West.

Pseudobulbis ovatis vel conicis sulcatis, foliis duobus, lineari-lanceolatis, apiculatis, floribus solitariis, glabris, sepalis aequalibus lanceolatis, apiculatis, supremo connivente, lateralibus labello parallelis, petalis conniventibus, linearibus sepalis brevioribus, labello trilobato, margine purpureo-maculato, glabro, disco carnoso anthera pubescente. Phytologist p. 8.

„Flowers smooth, internally yellow, externally purple. — Caudiculae two, glandula transverse, crescent-shaped. Pollenmasses two, each of which is divided into two distinct parts. This species possesses a creeping rhizoma, pp. In size and form the flowers nearly resemble these of barbata, but are solitary and of a different colour. Maxillaria aureofulva, barbata, and purpurascens possess double candiculae (as is the case also in the genus Bifrenaria) and their inflorescence in other respects differs so much from that of any other species of Maxillaria with which I am acquainted, that they may be considered as forming a very distinct group of the genus". Fred. Westcott. Introduced for the Birmingham Hort. Soc. by W. Fry Esq. 1840. The plant I have not seen and do not recognize.

3. BIFRENARIA HARRISONIAE Rchb. fil. Bonplandia III. 217. *Maxillaria Harrisoniae* Lindl. Bot. Reg. 897.

Maxillaria Harrisoniae albiflora Bot. Reg. XXVII. 1841. Misc. 68:

A delicate white var.[1] of this beautiful epiphyte has been imported by Messrs. Loddiges. Sepals and petals are a clear cream colour, just tinged with violet at the tip of the former. The lip is the same as in the original variety, but somewhat paler.

Regel Gartenflora V. 52. (var. alba). — Paxton Flower Garden III. Xyl. 277. — Hook. Lond. Journ. I. p. 189. On moist shady rocks, at Praya Vermelha. Aug. Gardner 127. Huc:

Maxillaria pubigera Klotzsch in Otto und Dietr. Allg. Gartenztg. 1835. 106:

Pseudobulbis brevibus ovatis tetragonis arido-vaginatis, apice atrofusco-annulatis monophyllis; foliis lato-oblongis triplinerviis coriaceo-rigidis, apice recurvato-acutis, basi in petiolum antice sulcatum attenuatis; racemo bifloro basilari fuscescente bracteato; bracteis aridis membranaceis amplexicaulibus acutis subcarinatis; perianthii foliolis magnis gynostemio adnatis latis obtusiusculis, exterioribus rubescentibus, apice cucullatis, inferioribus in calcar emarginatum decurrentibus, interioribus pallidioribus, apice recurvato-subacutis; labello trilobo, extus

albido glabro, lobis lateralibus subconvolutis flavidis purpureo-venosis, infus margineque pilosis, antice emarginato-rotundatis, intermedio ligulato reflexo apiculato-cucullato rubro-venoso piloso callo disci flavido-pubescente obtuse-tridentato; gynostemio albido curvato antice plano puberulo; anthera uniloculari subcristata albida; polliniis complanatis quatuor; glandula albida sublunata.

4. BIFRENARIA INODORA Lindl. Bot. Reg. XXIX. 1843. Misc. 63:

Pseudobulbis tetragonis, folio oblongo acuto plicato margine crispo, basi in petiolum brevem canaliculatum angustato, pedunculis unifloris, pseudobulbis brevioribus, sepalis oblongis obtusis, cornu elongato clavato, petalis subconformibus paulo undulatis, labello trilobo cucullato, lobis rotundatis undulatis subdentatis, intermedio piloso callo disci cuneato carnoso emarginato.

„Rio 1839 to Lemons coll. at Carclew. flowered in April 1843. Habit, appearance of Maxillaria tetragona, so near, as to have been mistaken for it, but on flowering it proved to be widely different from that species, and much handsomer, although scentless. Sepals dull green, slightly tinged with red. Petals of the same colour, but rather shorter. Labellum trilobed, outwardly of purplish-red colour, but inwardly more pale and delicate towards the base, where it tapers and forms a sort of pouch. The 2 lateral lobes are erect and of a pale brownish-red, marked with dark coloured veins. Middle lobe is roundish oblong, recurved and undulated at the margin. Outside it is smooth, but the inner surface is thickly covered with pale soft hairs. In the centre of it there is an elevated process. Column ⅓ the length of the labellum. Flowers as large as these of Maxillaria Harrisoniae.

Bot. Reg. XXX. 1843. sub Misc. 67: Flowers green, with a bright violet lip.

5. BIFRENARIA WAGENERI Rchb. fil. Bonpl. II. 17:

Pseudobulbis rotundis cepiformibus, foliis oblongolanceeis, pedunculis pendulis gracilibus trivaginatis, vaginis acutis valde abbreviatis, bractea subaequali ovario subpedicellato duplo breviore, sepalis oblongis acutis subaequalibus, lateralibus basi in calcar teretiusculum ovario aequilongum connatum productis, labello unguiculato, gynostemii basi adnato, flabelliformi, apice retusiusculo trilobo, lobis lateralibus obtuse triangulis, lobo medio retusiusculo apiculato, omnibus denticulatis crispatis, gynostemium clavatum involventibus, callo lineari apice tridentato croceo a basi ultra medium.

Blüthen von der Grösse derer der Helcia sanguinolenta. Ich habe die Pollenmassen nicht gesehen; das gespornte Kinn, die Lippenform, die Beschaffenheit der Leiste lassen mich ohne allen Zweifel auf eine Bifrenaria schliessen. Hülle rothbraun, innen blässer, Lippe weiss, rosig angehaucht. Caracas. Wagener.

b. Racemosae.

† Labellum trilobum.

6. BIFRENARIA RACEMOSA Lindl. Bot. Reg. XXIX. 1843. sub Misc. 67:
Maxillaria racemosa Hook. B. Mag. t. 2789. Lodd. B. Cab. t. 1318:

Pseudobulbis ovatis compressis tetragonis monophyllis, foliis oblongo lanceolatis tricostatis, scapis gracilibus strictis multifloris brevioribus, sepalis oblongis acutis, lateralibus basi valde elongatis, petalis linearibus, spatulatis triplo minoribus, labello oblongo cucullato, indiviso undulato emarginato in axi calloso, columna pubescente.

Brazil.

Flowers pale, dirty straw-colour, with a white lip, slightly speckled with pale crimson. It is well fig. in B. C.; the representation in B. M. appears to have been taken from a withered specimen. — Bot. Reg. XX. 1835. 1566.

Huc: *Bifrenaria melanopoda* Klotzsch in Otto u. Dietr. Allg. Gtz. 1855. p. 105:

Pseudobulbis parvis brevi-ovatis tetragonis monophyllis aggregatis; foliis oblongis arcuato-recurvatis acutis papyraceo-rigidis saturate-viridibus, basi attenuato-conduplicatis; racemis paucifloris radicalibus pendulis pseudobulbo paulo longioribus; floribus albidis parvis rubescenti-venosis; labello integro flabelliformi subconvoluto, apice inciso-fimbriato, intus sparsim crinito, infra apicem tuberculatim-calloso; columna pubescente.

7. BIFRENARIA VITELLINA Lindl. B. R. XXIX. 1843. sub Misc. 67:

Maxillaria vitellina Lindl. in B. R. 1838. Misc. 116. 1839. t. 12. *Maxillaria barbata* Westcott in Phytologist p. 7.

Pseudobulbis ovatis obtuse angulatis monophyllis, foliis lanceolatis in petiolum canaliculatum angustatis, racemo cernuo foliorum longitudine, labelli cuneati trilobi lobis lateralibus acutis antice crenulatis, intermedio bilobo rotundato cordato crenulato, tuberculo disci trilobo obtusissimo, ungue pubescente.

Brazil.

Flowers bright yellow, with a purple spot in the middle of the labellum.

Bot. Reg. XXV. 1839. 12:

Allied to M. racemosa, which differs in having an undivided labellum, a hairy column, and in many other circumstances. Brazil: exact locality unknown. Imp. Loddiges 1838.

Huc Lindl. Bot. Reg. XXVII. 1841. Misc. 141:

Maxillaria barbata Knw. Westc. Phyt. 7:

Pseudobulbis aequaliter quadrangularibus, corrugatis, vaginatis, foliis ovatis, costatis, acutis; floribus racemosis; sepalis inaequalibus, petalis majoribus, lateralibus explanatis, apice subinvolutis; labello cucullato, trilobato, barbato, margine crispo, apice gibboso, disco carnoso.

„Flowers about 8, yellow, disposed in a raceme. Labellum bearded, cucullate, threelobed, and having a fleshy excrescence on the disk; darker in colour, than the sepals and petals and marked in the centre and on the lateral lobes with a dark purple spot. Clinandrium entire. Caudiculae two, distinct. Gland transverse. Pollenmasses compressed, sulcate. Anther case onecelled and minutely pubescent like the column."

„This species in habit, in the form of the pseudobulbs and in the foliage, is very similar to Max. tetragona, but the flowers are altogether different, and bear resemblance to these of *Maxillaria aureofulva* Hook. fig. in the Floral Cab. 11. pl. 83" l. c.

This plant appears to be identical with M. vitellina. With respect to its supposed double caudiculae I must however observe that they are no more than the elastic centre which holds the pollenmasses of all O. pl. Vand to their common caudicula, and that they are very different from those truly double caudiculae properly so called, which exist in Bifrenaria.

8. BIFRENARIA LEUCORRHODA Rchb. fil. in Otto Hamb. Gtz. 1859. p. 54.

Huc: *Bifrenaria vitellina* Lindl., var. leucorrhodia Rchb. fil. Bonpl. III. 217:

Grandiflora, candida, labelli venis roseis. — Cultur des Herrn Garteninspectors Otto im Hamburger Bot. Garten.

9. BIFRENARIA AUREOFULVA Lindl. Bot. Reg. 1843. XXX. sub Misc. 67: Huc: *Maxillaria aureo-fulva* Hook. Bot. Mag. B. 3629. (N. S. XII.):

Pseudobulbis rotundato-ovatis 3—4angulatis rugosis monophyllis, folio elliptico-oblongo striato petiolato acuto, scapo radicali, folio longiori, floribus racemosis, sepalis oblongis acuminatis, lateralibus basi in calcar spurium obtusum connatis, petalis labelloque conformibus. Perigonium rubrum, apicibus phyllorum flavis.

M. Allcard received it from Rio.

Bot. Reg. 1843. XXX. sub Misc. 67: *Bifrenaria aureofulva* Lindl. (*M. aureofulva* Knowles and Westcott Floral Cabin. t. 83. *M. stenopetala* Knowles and Westcott Fl. C. 2. p. 112?)

Pseudobulbis rotundato-ovatis angulatis rugosis monophyllis, foliis oblongo-lanceolatis costatis acutis scapo radicali multifloro brevioribus, floribus longe pedicellatis, sepalis lanceolatis acuminatis, lateralibus apice reflexis, petalis striatis linearilanceolatis acuminatis, labello unguiculato trilobo in medio striato; lobis lateralibus acutis intermedio lanceolato lanceolato acuminato,

Brazil. — Very pretty. Flowers orange colour. It is the „Epid. Limodore" of Descourtilz, and was found by that traveller in great abundance upon fallen trees encumbering the sandy plain through which the great public road passes from Bananal to Ilha Grande.

Bot. Reg. XXVI. 1840. Misc. 43: gynizo subrotundo margine superiore crasso. Organ Mountains. From the observation of the authors of the Floral Cabinet it has the technical characters of Bifrenaria.

Huc: *Maxillaria stenopetala* Knwl. et West. Fl. C. II. 1838. p. 112:

Pseudobulbis angulatis rugosis, foliis ovato-lanceolatis costatis, scapo radicali multifloro, floribus longe pedicellatis apice reflexis, sepalis lanceolatis acuminatis, petalis striatis linearilanceolatis acuminatis, labello unguiculato, trilobo, in medio striato, lobis lateralibus acutis, lobo intermedio lanceolato acuminato, gynizo subrotundo margine superiore crasso.

Flowers orange, pétals and labellum striped with a darker colour. Organ Mount. Oct. 1851.

† † Labellum trifidum.

10. BIFRENARIA AURANTIACA Lindl. B. Reg. XXII. (1836). 1875:

Pseudobulbis subrotundis compressis diphyllis, foliis oblongis plicatis racemi erecti longitudine, petalis erectis, labelli lobis lateralibus semicordatis, intermedio transverso ovali subundulato basi calloso, columna pubescente.

Demerara. — Bot. Mag. 3597. — Bot. Reg. XXX. (1843) sub Misc. 67: Pseudobulbs and leaves beneath spotted crimson.

II. Folia subulata.

11. BIFRENARIA HADWENII Lindl. Paxt. Fl. G. II. p. 67. N. 332. (*Scuticaria Hadwenii* Hort.):

Floribus solitariis, sepalis petalisque undulatis acuminatis, labello cucullato marginato subrepando intus pubescente crista tridentata,

Sent by Mr. De Becca of Rio. Habit is distinct from Scuticaria Steelii having leaves or stems not more than 12—14 inches long, which gives appearance of a Brassavola. From what I learn, flowers are solitary and on long stems like the one sent. — Probably allied to B. inodora. 3" diam exp. Sepals convex, those at the side slightly extended into a chin. Petals similar, converging over the column, which is quite smooth. Dull nankeen colour with broken brown bars. Lip much paler, with broken rose coloured streaks, rounded at the point and turned inward at the base, so as to

resemble a slipper. When flattened out: rhomboidal outline. On upper side it is hairy and bears in centre a conspicuous 3toothed fleshy appendage. Pollenmasses in two pairs, each placed upon a short strap, which connects it with a very narrow crescent shaped gland.

Hook Bot. Mag. 4629. Van Houtte Flore des Serres VII. 731. (Eadem Icon). Lem. Ill. Hortic. 232.

1411 b. SCUTICARIA *Lindl.*

B. Reg. XXIX. 1843. p. 14.

Flores ringentes antice in mentum rotundatum producti, expansi. Labellum continuum, membranaceum, trilobum, medio tuberculatum. Columna semiteres. Pollinia 4, per paria in glandulam utrinque acuminatam medio dilatatam sessilia, extus angulata. Rhizoma articulatum, ramosum, ebulbe. Folia flagelliformia.

1. SCUTICARIA STEELII Lindl. Bot. Reg. l. c. Huc: *Maxillaria Steelii* Hook B. M. 3573:

Pseudobulbis oblongis annulatis monophyllis, folio longissimo hinc canaliculato, scapo radicali brevi unifloro, perianthio connivente, labello basi intus glandula oblonga, lateribus inflexis, lobo intermedio obtusissime bifido.

Comm. from the stove of John Moss Esq. Otterspool, near Liverpool, together with a drawing by Miss Moss, from which the accompanying figure was made. It was introduced in July of last year (36) by Matthew Steele Esq. from Demerara. With the flower of Maxillaria it has a foliage quite at variance with any described species of the genus, attaining a height of two and even 3 feet, and proves a most valuable addition to our Epiphytes.

Perianthium flavum, purpureo adspersum.

Bot. Reg. XXIII. 1837. 1986:

Caule pendulo nano ramoso squamato, ramulis monophyllis, foliis longissimis flagelliformibus canaliculatis, floribus solitariis axillaribus, sepalis petalisque obtusiusculis, labello trilobo, lobis lateralibus erectis rotundatis, intermedii bilobi laciniis rotundatis subcuneatis divergentibus callo baseos elevato apice obtuse tridentato.

Folia 3—4 pedes longa, apice subulata. Flores flavi, maculis irregularibus tigrini; labellum potius interrupte venosum, quam maculatum. Columna semiteres. Pollinia 4, in glandulam transversam utrinque aristatam sessilia, per paria distincta glandulae agglutinata. *Maxillaria flagellifera* Lindl. in hortis.

1411 c. KOELLENSTEINIA *Rchb. fil.*

Bonpl. II. 17.

Perigonium herbaceum patulum, mentum valde breve. Sepala oblongolanceolata acuta. Labellum unguiculatum, statim dilatatum in laminam ambitu quadratam, basi rotundata cordatam sinubus angustis lateralibus et emarginatura apicis (Cyrtopodii more) quadrilobam, lobi laterales rhombeo trianguli erecti, antici subaequales, longiores, unguis ad medium usque incrassatus, callo incrassationis ibi abrupte emarginato reciso, callus alter inter utrumque lobum basilarem postice medio bidens, inferne cavitatem sub se occultatam gerens, lateribus et antice laminae labelli omnino adnatus. Gynostemium breve subcurvatum, anguli antici

ac androclinium lato alato marginati, limbus circa androclinium trilobus, lobi laterales oblique rhombei, lobulus medius triangulus, membrana summo androclinio non adnata, sed apposita, inferius tantum cum gynostemio connata. Rostellum trilobum erectum, lobi laterales obtusi, medius dentiformis, stigmatis fovea inaequaliter transverse panduraeformis. Anthera mitraeformis apiculata depressa recumbens in androclinio horizontali. Pollinia duo oblongolinearia, a latere interno alte biloba, sessilia in caudiculae oblongae medio longitudinaliter carinatae disco; glandula adnata.

1. KOELLENSTEINIA KELLNERIANA Rchb. fil. Bonpl. II. 17:

Ein in Scheide axillärer, schlanker, über fusshoher Blüthenstiel trägt unten ein paar kurze Schuppen, oben eine Traube Blüthen, so gross wie die der Warrea tricolor. Hülle grün, Lippe weiss mit Purpurquerbändern. Schwiele weiss, Säule weiss und purpurn. Ueber fusshohe längliche spitze stielig verschmälerte Blätter. Trugknollige Anschwellung der alten Zweigglieder. Blüthe riecht wie manche Stapelien. Truxillo. 7000'. December. Wagener. Ich habe auch Exemplare von Neu-Granada erhalten.] — Diese durch Kappenflüglung und Lippe ausgezeichnete Gattung ist dem Andenken des verstorbenen kais. östr. Hauptmanns Kellner von Köllenstein, eines eifrigen Pflanzenfreundes und Pflanzensammlers, gewidmet. *Zygopetalum tricolor* Lindl. muss sehr nahe stehen. Die karge Beschreibung sagt „foliis gramineis." — Rchb. fil. Xenia Orchid. I. 64. Tab. 24. III. 10—18.

Rchb. fil. Bonpl. II. 281. Ocanna. July. 5000'. Nr. 730. Schlim.

2. KOELLENSTEINIA TRICOLOR Rchb. fil. Mss. Huc: *Zygopetalon tricolor* Lindl. Bot. Reg. 1846. t. 64. adn. Walp. Ann. I. 787.

3. KOELLENSTEINIA GRAMINEA Rchb. fil. Huc: *Maxillaria graminea* Lindl. Bot. Reg. XXI. 1836. sub 1802:

Pseudobulbis nullis, foliis gramineis recurvis, perianthio campanulato, sepalis oblongis obtusis lateralibus paululum connatis, petalis angustioribus, labello cum pede longo producto columnae articulato trilobo; lobis lateralibus semiovatis acutis ascendentibus, intermedio majori reniformi tuberculo disci magno carnoso truncato postice bilobo.

Blossoms pale yellow, with the segments a little banded with purple near the base. A small and inconspicuous species.

Demarara imp. Lowe.

141½. STENOCORYNE *Lindl.*

Bot. Reg. XXIX. 1843. Misc. 68.

Flores ringentes, clausi, longe cornuti. Sepala basi longissime producta et connata. Petala conformia. Labellum longissime unguiculatum, trilobum, disco callosum. Pollinia per paria connata, inaequalia, semiglobosa; caudiculis 2, glandulisque totidem ovalibus.

Herbae epiphytae pseudobulbosae. Folia cartilaginea, solitaria. Flores racemosi, radicales.

1. STENOCORYNE LONGICORNIS Lindl. Bot. Reg. XXIX. 1843. Misc. 53:

Pseudobulbis elongatis tetragonis, foliis oblongo-lanceolatis subplicatis nitidis, racemo laxo multifloro, sepalis lateralibus ovatis acutis, petalis ovatis acutis, labello longe unguiculato spathulato apice trilobo laciniis rotundatis, media pubescente disco elevato calloso.

Demerara.

Flowers racemose, orange, spotted with brown.

Bot. Reg. XXIV. 1838. Misc. 177: *Bifrenaria longicornis* Lindl.

If this plant is really to be referred to Bifrenaria, it will be necessary to modify the character of that genus very considerably; for the lateral sepals are extended into a long slender clavate spur, and there are 2 glands as well as 2 caudiculae to the pollen masses. Its relationship to B. aurantiaca is however such as to make one unwilling to separate it at present. The flowers are orange spotted with brown and in a raceme like that of the species just mentioned. Messrs. Lodd. imported it from Demerara

114½. COLAX *Lindl.*

Bot. Reg. XXIX. 1843. Misc. 65.

Flores subglobosi, vix ringentes, in mentum breve producti. Sepala et petala subaequalia. Labellum unguiculatum, trilobum, inappendiculatum, planiusculum (vix cucullatum). Columna paulo elongata semiteres, clinandrio marginato. Anthera carnosa, cristata. Pollinia 4, in paribus globosis colligata, caudiculae obovatae membranaceae adnata; glandula nulla, rostello fisso.

Herbae pseudobulbosae; folia terminalia et radicalia, plicata. Pedunculi radicales erecti, uniflori, vaginati. Flores virescentes.

Closed, scarcely ringent flower of Promenaea and Warrea, but a caudicula quite unlike any thing at present known among their race.

1. COLAX JUGOSUS Lindl. Bot. Reg. XXIX. 1843. sub Misc. 65. (Huc: *Maxillaria jugosa* Lindl. Bot. Reg. 1841. Misc. 104):

Sepalis oblongis incurvis, obtusis, petalis conformibus concavis basi angustatis, labelli sigmoidei oblongi unguiculati pilosi jugosi lobis lateralibus nanis obtusis, intermedio semi-circulari, columna apice lobata bisulca villosissima.

Brazil.

Near C. placanthera, from which it differs in having the flower of a globose figure, with much less linear sepals and concave oblong petals narrowed to the base. These parts are of a rich cream colour, speckled with crimson. The lip has quite a different form, being semicircular at the tip, deeply furrowed and closely covered with short hair. The column has 2 deep furrows in front almost buried in hairs.

Huc: Rchb. fil. in Bonpl. III. 226. Pedunculus apice biflorus teres. Vagina et bracteae amplae herbaceae oblongo lanceae. Ovarium bractea brevius eboraceum album. Mentum modicum. Sepala oblonga acutiuscula candida eboracea; supremum latius. Tepala cuneata oblonga alba guttulis atropurpureis frequentibus marmorata. Labelli unguis cum lamina introrsum curvata angulatus; lobi laterales semiovati obtusi erecti medio incrassati, callo in basi lobi medii hastato semiovato descendente, quadrisulcato, superficie basilari minute velutina, punctuli et guttulae multi, lazulini, seriati in basi viridiuscula; discus lobi medii lazulino guttatus. Gynostemium semiteres, candidum, superne atropurpureo punctulatum, antice bis canaliculatum, bene villosum, superne clavatum, ampliatum; anguli antici extrorsi semiovati ancipites; androclinium immersum, limbo crasso ancipiti erecto. Anthera depressa quadrata, medio foveata. — Garten des Herrn Senator Jenisch, cultivirt von Herrn Kramer. Rchb. fil. Xenia I. p. 107. Tab. 41.

2. COLAX VIRIDIS Rchb. fil. Huc: *Colax viridis* Lindl. Bot. Reg. XXIX. 1843. sub Misc. 65. (*Maxillaria viridis* Lindl. Bot. Reg. 1510.)

Flowers green, with a dingy violet lip. That it differs from C. placanthera, in the manner stated under that species, I know from having preserved the specimen from which the figure in the Bot. Reg. was taken, which figure well represents the

peculiar rounded form of the sepals. I believe it is no longer in our gardens; for C. placanthera is usually cultivated under its name.

Huc: *Maxillaria placanthera* Hook. Bot. Reg. XXVII. 1841. Misc. 103: „anthera plana acuta."

Huc: *Colax placanthera* Lindl. Bot. Reg. XXIX. 1843. sub Misc. 65:

Sepalis lineari-oblongis obtusis intus secus medium seriatim maculatis, petalis angustioribus omnino conformibus maculatis, labelli angusti trilobi minute pubescentis laevis lacininiis lateralibus acutis nanis, intermedia dilatata rotundata cuneata, columna apice lobata versus basin bisulca pubescente.

Brazil.

I was certainly wrong in referring this plant to C. viridis, from which it differs in its sepals and petals being much narrower, the flowers less green, the lip larger, and of a different form in its upper lobe.

Rchb. fil. in v. Schl. B. Z. 1852. 669: *Colax*. Hr. Garteninspector Bouché zeigte mir im Neuschöneberger Garten Exemplare von *Colax placanthera* Lindl. und *Colax viridis* Lindl. Er hatte sie von derselben Mutterpflanze, mithin fallen beide Arten zusammen. Hierher gehört noch *Maxillaria cyanocheile* Hffg.!

3. COLAX MODESTIOR Rchb. fil. in Otto Hamb. Gartzg. 1860. 14.

1412. BATEMANIA *Lindl.*

Bot. Reg. XX. (1835.) 1714.

Flores ringentes; sepala patentia, lateralia unguiculata, basi aequalia, petala sepalis latiora, basi obliqua, pedi producto columnae adnata; labellum cum columna articulatum trilobum, cucullatum; columna semiteres, basi elongata, clinandrio marginato; anthera parva, bilocularis; membranacea; pollinia 2, postice biloba, glandula triangulari, caudicula nulla.

1. BATEMANIA COLLEYI Lindl. Bot. Reg. l. c.:

Epiphyta. Pseudobulbi ovati subtetragoni, lucidi, olivacei, subcorrugati, ovi gallinacei magnitudine. Folia 2—3 obovato oblonga, plicata, basi angustata. Racemus radicalis, pendulus, semipedalis, laxe 5—10 florus. Bracteae rhombeae, striatae, cucullatae, inflatae. Flores pedicellati, ovario pedicello breviore. Sepala et petala pollicem longa, intus fusco purpurea, extus viridi vitta notata, apice quoque viridia. Sepalum posterius oblongum obtusiusculum; lateralia spatulata, divergentia, petalis paulo longiora; petala a basi triangulari oblonga, sepalo supremo latiora. Labellum oblongum, ultra medium disci tridentatum, album, intus lutescens, extus levissime rubescens, lobis rotundatis, serrulatis, lateralibus intermedio subcuneato brevioribus. Anthera membranacea, depressa, quadrata, bilocularis. Rostellum subulatum. Clinandrium marginatum, dentatum. Stigma rima parva transversa.

B. M. 3818: Sent by Fraser from Demerara to the Glasgow B. G. having first been detected by Mr. Colley, Mr. Batemans collector in the same country.

2. BATEMANIA FIMBRIATA Lind., Rchb. fil. Bonpl. II. 280:

Labello oblongo acuto ante basin utrinque angulato, toto margine serrulato, carinis septem in basi elevatis, androclinii cucullo lacero. — *Galeottia fimbriata* Linden Cat.

Eine schöne Art mit grossen Blüthen, deren Färbung an die des Cymbidium giganteum erinnert, nur sind die Farben brennender. Sepala und Tepala lanzettlich, fein zugespitzt. — Zygopetalum grenzt durch Z. rostratum Hook. an diese Gattung. — Wälder Ocannas. 4—5000'. Nr. 42. Schlim.

3. **BATEMANIA GRANDIFLORA** Rchb. fil. Bonplandia 1856. IV. 323. Huc: *Galeottia* A. Rich. Ann. sc. nat. 1845. Jan. p. 25:

Flores resupinati. Sepala exteriora libera, lanceolata, acutissima, patentia, aequalia, interna paulo minora subcarnosa, basi lata; labellum brevissime unguiculatum, basi gynostemii productae articulatum, subconcavum, trilobum, lobo medio majori fimbriato, apice longe acuminato; gynostemium arcuatum, margine membranaceum, alis truncatis, denticulatis; anthera operculiformis 2-locularis. Stigma concavum, rostellum acutum, glandula ovali antice attenuata; pollinia 4 per paria superposita, compressa, caudicula. .....

G. grandiflora Rich. et Gal. l. c. et tab. 27.

4. **BATEMANIA MELEAGRIS** Rchb. fil. Bonpl. III. 217. Batemaniae genus Zygopetalo Sect. Zygosepalo valde affine. Hoc recedit glandula profunde biloboemarginata.

Huc: *Huntleya Batem.* B. Reg. XXIII. 1837. sub fol. 1991:

Perianthium explanatum, subaequale, sepalis lateralibus basi involutis vix obliquis. Labellum planum unguiculatum, rhomboideum, patens, basi longe fimbriatum, cum basi libera producta columnae articulatum. Anthera bilocularis mutica. Pollinia 4. Herbae caulescentes. Folia ligulata, disticha. Flores axillares (solitarii).

Huntleya Meleagris Lindl. Floribus longe pedunculatis. In Brasilia. Epidendre fritillé Descourtilz Ic. Orch. Bras. ined. t. 8.

Planta Vandae omnino facie. Folia pedalia, flabellatim disticha. Pedunculi cum ovario 5 pollices longi. Flores diametro 3—4 pollicari, medio candidi, ultra medium Fritillariae Meleagridis aspectu et colore vinoso. Labellum ovato-rhomboideum, acutum. Columna apice virens.

Bot. Reg. XXIV. 1838. Misc. 20: flowers with Rollissons. Flowers 3" across. Pale yellowish white, with a brownish purple tint towards the upper part of sepals and petals. Lip of the same pale colour as the base of the petals. Across the end of the lip is stretched a broad yellow-fringed crest, which is very remarkable.

Bot. Reg. XXV. 1839. 14: Sepalis petalisque ovatis acuminatis tessellatis, labello subconformi unguiculato concavo, crista basees fimbriata, columnae cucullo crenato.

The only specimens I have seen flowered with Messrs. Rollissons July 1838. Its blossoms are much yellower and less tessellated with purple, than in the Brazilian drawing from which the species was first described. The whole surface of the flowers has quite the appearance of being glazed. This charming plant is found in gloomy damp woods on the banks of Rio di Pirapitinga, in the district of Bananal. It is scentless, flowers in June. Descourtils. — Mr. Rollisson asures me, that he received it from the same country, as that which produced the Zygopetalum cochleare Bot. Reg. 1837. etc. Cf. Zygopetalum cochleare.

5. **BATEMANIA BEAUMONTII** Rchb. fil. Walp. Ann. III. 544. Lindl. Paxt. Fl. G. I. Ic. 12. Nr. 11. Diagn. cf. Walp. l. c.:

That it is a Galeottia, there is no doubt; an obscure genus founded by Mr. A. Richard upon a Mexican plant unknown in gardens, and which may possibly be found not distinct from Batemania. The only difference, indeed, which we see, in the present instance, is that this Galeottia has a large ovate gland and short caudicle, while Bat. has a large ovate gland and no caudicula. — Stenia Beaumontii A. Rich. Cat. Hort Pesc. — Bahia. Morel. Flowers 2 in a stalk, dull green and brown, with a pale lila lip.

Gardn. Chronicle 1850. p. 41: the genus is extremely near Batemania, and perhaps not really distinct.

Rchb. fil. in Schl. B. Z. 1852. p. 670: Eine Batemania; es ist ganz genau in allen Organen derselbe Plan befolgt, nur hat diese höher entwickelte Art eine längere Caudicula.

1415. GOVENIA *Lindl.*

Lodd. B. Cab. 1709.

1. GOVENIA UTRICULATA Lindl. B. Reg. XXV. 1839. Misc. 66. Bot. Mag. 4151:

Pseudobulbo ovato vagina ampla membranacea striata pellucida oblongo-attenuata incluso, foliis binis lato oblongis acuminatis plicatis basi attenuatis, racemo elongato multifloro, sepalis petalisque curvatis acuminatis, labello oblongo ovato acuto.

Cymbidium utriculatum Sw. LO. 170. Jamaica. Macfadyen. Purdie. Leaves two, 1 foot and more long. Scape radical, 1—1½' long, erect, terete. Raceme 6—8''. Sepals and petals white, lip with three red spots at the apex.

Huc citata ab ipso cl. Lindl.:

Govenia lagenophora Lindl. B. R. XXV. 1839. Misc. 66:

Pseudobulbo ovato vagina lagenaeformi utriculata incluso, petiolis quadrigonis, racemo longissimo multifloro, labello ovato obtuso omnino glabro, sepalis petalisque obtusis.

Mr. John Rogers Esq. Jun. imported it from Mexico.

2. GOVENIA LILIACEA Lindl. B. Reg. XXI. 1836. sub 1795. B. R. XXIV. (1838). t. 13

Labello ovato basi ima cucullato, spica oblonga, scapo univaginato,: bracteis oblongis cucullatis, foliis obovatolanceolatis plicatis, radicalibus scapo brevioribus, radice tuberosa.

Maxillaria liliacea La Llave et Lexarza nov. veg. descr. 12. 1' high, Mexico imp. by. George Barker Esq. — The colour of the flowers is not a good or pure white, but they are delicately streaked upon the petals with lines of rather pale purple. From G. superba it differs not only in colours, but in the form of the labell, which is not at all cordate, or chanelled along the middle. The first notice we have of the existence of this species is from Hernandez, who in the Madrid edit. of his work calls it by the name of: „Iztactepetzacuxochitl Icohueyo." It was many years afterwards described and named more scientifically by Paul de la Llave and John Lexarza in their Nov. Veg. Descr. These authors state, that it is met with near Valladolid in Mexico, under the shade of trees or sometimes growing over their roots, and flowering the summer months; its vernacular name is Azuzena del Monte.

Lindl. in Benth. Pl. Hartwg. 1842. p. 93: In praeruptis. Guatemala nec non Cuesta de Mexico. Mexico. Hartweg. — Knw. et Westc. Fl. Cab. II. 68.

3. GOVENIA PAUCIFLORA Lindl. Ann. Nat. Hist. X. 1842. 184:

Foliis binis oblongis scapo paulo brevioribus, racemo 7—8floro, bracteis lanceolatis membranaceis pedicellis brevioribus, sepalis oblongis acutis, petalis labelloque intus laevi ovato lanceolatis, anthera mucrone recurvo.

Mexico. Near Jesus del Oro. Karwinski in hb. reg. Monac.

A very remarkable species with short oblong, acute leaves, and a fewflowered scape not much longer than themselves. The whole plant is little more than a foot high.

4. GOVENIA MUTICA Rchb. fil. in v. Schld. B. Z. 1852. 836:

Foliis late oblongis utrinque attenuatis, apice acutis, pedunculo validissimo, trivaginato, vaginis amplis, laxis, acutis, racemo multifloro, bracteis oblongis, acutis basi angustatis, ovaria pedicellata superantibus, perigonii phyllo summo lanceolato, acuto, p. lateralibus externis lanceolatis, acutis, semilunatis, lateralibus internis semilunatis apiculatis la-

bello panduraeformi, apiculato (apiculo reflexo), phylla l. e. haud aequante, gynostemio apicem versus utrinque obtusangulo alato, anthera mutica.

Blüthen so gross, wie bei *G. Gardneri* Hook., wohl weiss. Zacuapan in Mexico. Leibold.

5. GOVENIA DELICIOSA Rchb. fil. in v. Schl. B. Z. 1852. 836:

Foliis oblongis acutis basi cuneatis, pedunculo valido bivaginato vulgo non aequalibus, racemo multifloro, bracteis oblongis, acutis, ovaria pedicellata non aequantibus, apice obscuris, perigonii phyllo summo lineari-lanceolato acuto, basi utrinque obtuse humerato, plica utrinque in margine medio elevatula, phyllis lateralibus externis subaequilongis, gynostemio gracili, labellum vix aequante, margine membranaceo superne paululum obtuse angulato, antherae apiculo subobsoleto, sc. brevissimo antrorso.

Blüthen weiss, etwa so gross, wie bei *Govenia Gardneri*, 1—2 Fuss hoch. Mirador. Heller! Mexico. Schiede!

Obs. Huc sequens planta omnino non recognoscenda ob antheram neglectam inserenda videtur. In herbario Galeottii Goveniae liliaceae Lindl. specimina reperio:

Govenia alba Rich. et Gal. Ann. sc. nat. 1845. Jan. p. 25. Foliis binis petiolatis elliptico-oblongis acutis, pedalibus; floribus albis parvulis; labello unguiculato sepalis dimidio breviore, ovali, acuto. Mexico.

6. GOVENIA GARDNERI Hook. B. M. 3660. (XII. N. S. 39):

Foliis elliptico-lanceolatis membranaceis plicatis solitariis vel binis petiolatis, petiolis scapoque vaginatis, petalis sepaloque superiori concavis conniventibus galeam formantibus, petalis lateralibus porrectis, labello lato oblongo recurvato apiculato medio bituberculato, apice glandulifero.

Orchidea. Gardn. Pl. exs. Bras. n. 670.

Perigonium albido luteolum, labellum brunneo adspersum.

Organ Mountains Brasiliae Gardner. Flowered at Glasgow B. G. in Octob. 1839.

Bot. Reg. XXV. 1839. Misc. 51:

Scapo obtuse tetragono medio vaginato, racemo elongato floribus post anthesin refractis, bracteis oblongis herbaceis, ovarii dimidii longitudine, sepalis petalisque ovatis obtusiusculis, labello ovato acuto nudo apice maculis 5 marginalibus notato, lineis duabus convexis convergentibus in medio, antherae cornu brevi inflexo.

Fig. of B. M. seems to have been taken from a specimen out of health, for the colour of the flowers and their markings are by no means such as I find them in a specimen now before me, for which I have to thank my friend John Miers. The flowers are pure white, the petals are delicately spotted with violet dots inside; the lip is downy at the base, and yellowish-green except at the point, where it is white, with five small equidistant spots, of which the 3 in the middle are bright orange colour, and the 2 side ones, which are much more indistinct, dull purple. Mr. Miers tells me, that he found it flowering in the month of Febr. on the Organ Mountains, at 2 distant intervals from 3000—3500' feet above the level of the sea; at the lower one in an exposed situation on a bank, at the higher, in a wood upon a quantity of rich mould in the hollow of a decaying tree.

7. GOVENIA CAPITATA Lindl. Bot. Reg. XXI. 1836. sub 1795:

Labello ovato obtuso, racemo capitato, bracteis oblongis obtusiusculis, foliis oblongis acuminatis basi angustatis scapo multo brevioribus.

Mexico.

Mexico. Atotovilco el Chico, in a cool climate. Karwinski (Herb. Mon.). Leaves oblong-lanceolate tapering to each end, especially to the point, a foot long, about 5 inches wide, very like these of Govenia superbe except that they are smaller. Stem 5' high terminated by a short and very dense headed raceme of large flowers, to each of which is an oblong obtuse bract not quite so long as the ovary. The raceme is 4 inches long, and as much broad at the base. In the form of the flowers it resembles Gov. superba very much, but they are 3 times as large; the sepals are an inch and half long, and the other parts in proportion. The lip has an ovate form, but is not cordate at its base; it is not quite half so long, as the sepals, and is marked towards its end with largish, round, very dark dots. The colour of the flowers cannot be ascertained, probably pale, and uniform; pale yellow?

Lindl. in Benth. Pl. Hartw. p. 72: Rancho del Ojo de Agria Mexici. Hartweg.

8. GOVENIA ANDRIEUXII Rchb. fil. in v. Schl. B. Z. 1852. 835:

Foliis oblongis, acuminatis, pedunculo valido univaginato, apice racemoso, racemo denso, brevi, bracteis oblongis acuto-acuminatis, ovaria pedicellata haud aequantibus, perigonii phyllo summo oblongo cuneato acuto, phyllis lateralibus externis oblongis, curvatis, divaricatis, labello haud dimidio longioribus, phyllis lateralibus internis cuneatis oblongo dilatatis acutis, labello a basi sensim lato-cuneato, dilatato, latius subquadrato, antice acuto, plica elevata transversa utrinque versus basin, gynostemio incurvo, aequaliter membranaceo marginato, antherae apiculo...

Blüthen halb so gross, als die der *Govenia capitata* Lindl. „Dendrobium (flore dilute flavo, nigro maculato). In monte San Felipe. Julio." G. Andrieux. Pl. Mexic. exsicc. Nr. 88. Wie bei *Govenia capitata* Lindl. zeigen sich purpurne Flecke auf der Spitze der Lippe, allein sie gehen nicht so weit nach der Mitte.

l. c. p. 937: antherae apiculo subulato, incurvo, abbreviato.

9. GOVENIA SUPERBA Lindl. Bot. Reg. XXI. 1836. 1795:

Labello ovato cordato, spica cylindracea, bracteis acuminatis, foliis oblongis acuminatis basi angustatis scapo aequalibus.

G. superba Lindl. Lodd. Bot. Cab. 1709. LO. 153.

Caulis cum foliis 5pedalis. Folia 3pedalia et ultra, basi vaginis purpurascentibus vestita. Racemus 1 — 1½ pedalis, cylindraceus, floribus onustus. Sepala 7''' longa, lateralia semi-oblonga. Petala oblique rhomboidea acuminata. Labellum 3 lineas tantum longum, lividum, unguiculatum, cordatum, ovatum, obtusum, supra canaliculatum.

Azuzena amarilla.

Mexico near Valladolid. Lexarza, La Llave.

10. GOVENIA FASCIATA Lindl. Bot. Reg. XXIX. 1843. Misc. 107:

Foliis latis ovalibus acutis, spica laxa, bracteis ovario aequalibus abrupte acutis, sepalis angustis acutis, petalis (obovato lanceolatis duplo) latioribus, labello oblongo subquadrato, apiculato, intus laevi, antherae mucrone inflexo.

„Mexico". Mr. Linden sent to Mr. Rucker.

Pretty, having clear yellow flowers, whose sepals and petals are beautifully marked by fine broken bands of crimson. The long bracts, thin narrow spike of flowers and oblong, not ovate lip of flowers are the marks, by which it is best recognized.

Not Mexican: it is among Mr. Linden's Merida plants: 644, 654. Both found by that most industrious collector in Venezuela, in damp forests, at the height of 5000' ab. the sea, and are distinguished from each other in his memorandum by the flowers of one having the markings more broken into specks and spots, than the other. Gathered 1842. Long bracts! thin, narrow spike of flowers and oblong, not ovate lip are marks. Leaves 1' long, 3" wide.

Lindl. Orchid. Lind. 1846. p. 18: „An epiphyte from damp forests in the vicinity of Merida, at the height of 5000'. Flowers in May. Flowers yellow, in one variety striped with red, in the other dotted with red." Linden N. 644. 654.

Obs. Eadem videtur planta sequens:

GOVENIA TINGENS Endl. Pöppig Nov. Gen. et Sp. — Rchb. fil. in v. Schl. B. Z. 1852. 835:

Foliis cuneatis, oblongis, acutis, pedunculo valido 1—2 vaginato, apice racemoso, racemo multifloro, demum laxo, bracteis oblongis, apiculatis, seu acutis, ovariis pedicellatis brevioribus, perigonii phyllo summo oblongo cuneato acuto, phyllis lateralibus externis oblongis, acutis, incurvis, labello vix longioribus, lateralibus internis subaequalibus latioribus, paulo longioribus; labello a basi gynostemii subito dilatato, triangulo, lateribus obtusatis, humeratis, apice longitudinaliter biplicato (plicis baseos nullis), gynostemio incurvo, alato-marginato, ala apicem versus obtusangule producta, antherae apiculo uncinato, abbreviato.

G. liliacea Lindl. hat eine lange gekrümmte Spitze der Anthere und 2 parallele Längsfalten am Lippengrund. — Cuchero in Peru. Pöppig.

Rchb. fil. in Bonpl. II. 18:

Stimmt fast völlig mit *G. fasciata* Lindl. Diese zeigt aber auf der Abbildung einen herzförmigen Grund. Die Originalabbildung darf man ja nicht benutzen; da sieht man Leisten auf einer dreizähnigen Lippe, Pollinia collateralia, bicaudiculata und Andres. Ich habe mich an die Originalexemplare gehalten und die Pflanze bereits früher darnach beschrieben (Berl. Bot. Ztg. 1852, 835). Dass die Farbe auf der Tafel falsch ist, zeigt der dortige Text. — Dendrobium latifolium Hb. Kunth. ist ganz gewiss eine Govenia und höchst wahrscheinlich diese Art. Es existiren 2 nicht wohl erhaltene Blüthen ohne die charakteristischen Antheren. — Caracas. Wagener.

Rchb. fil. in Bonpl. II. 281: Unter Gesträuch bei Ocanna. 6000'. Mr. 734. Schlim.

Rchb. fil. Linnaea XXVI. 144.

1418. CYCNOCHES *Lindl.*

Orch. 154.

Obs. Primum proponimus sexus varios juxta characteres florum ordinatos, dein reducimus sexus quantum fieri potest. (Cf. Lindl. Paxt. Fl. G.)

A. Sexus et species mixti.

† Labellum integrum.

1. CYCNOCHES LODDIGESII L. O. l. c. — Lodd. Bot. Cab. 2000. B. M. 4215. B. R. XXI (1835). 742:

Sepala viridia apice fusca, et obscure maculata, mox rufescentia; supremum lineari oblongum, arcuatum, tres pollices longum; lateralia duos pollices longa a basi connata, ovato oblonga, subundulata, pendula. Petala ejusdem coloris cum sepalis, sed minus conspicue maculata, oblongolanceolata, inaequilatera, decurva, $2\frac{1}{2}''$ longa. Labellum patentissimum, cum columna continuum, angusto oblongum, convexum, carnosum, medio album, apicem versus tenuius, sordide lutescens, undique maculis latis inaequalibus sanguineis notatum; ungue brevi alato maculoso, alis lutescentibus; disco convexo album. Columna gracilis, arcuata, utrinque clavata, dimidio inferiori atropurpureo, superiore complanato virescente purpureo maculoso. Anthera cito decidua. Clinandrium postice bicorne, cornubus falcatis supra antheram incurvis.

Paxt. Fl. G. III. p. 6. Sports by producing smaller broadlipped flowers without scent and with very short cucullate clubshaped column.

var. leucochilum Hook B. M. 3855: labello immaculato.

2. CYCNOCHES VENTRICOSUM Bat. Orch. Max. Guat. Tab. 5:

Sepalis petalisque lanceolatis acumine reflexis, labello integro ventricoso acuminato basi calloso, ungue brevi; columna arcuata sepalo supremo duplo breviore.

Guatemala. Istapa. Skinner.

Leaves lanceolate 5—6. Stem 1'. After flowering season leaves fall off, stem becomes shorter and more swollen, and is then deeply marked by longitudinal lines, as well as by horizontal contractions at the points from whence the leaves fall. From the axils of the upper leaves: racemes, 2—more, at the same time sometimes, but more usually in succession; each of these bears about 5 flowers, which open simultaneously lasting about 3 days. Raceme first horizontal. Sepals lanceolate. Petals curved downwards, of a light green colour, as are also sepals. Lip white, connected with the column by a short clow, which presents a black callosity.

b. SEXUS? WARSCEWICZII Rchb. fil. Huc: *Cycnoches Warscewiczii* Rchb. fil. in Schl. B. Z. 1852. 754.

Perigonii phyllis oblongis erectis, lateralibus omnibus curvatis, labello abbreviato, lato unguiculato, dein oblongo acuto, carnosissimo, margine membranaceo, callo baseos crassissimo antice rotundato, Bolleae violaceae more intruso, gynostemio abbreviato, semitereti, crasso, incurvo, utrinque pone foveam stigmaticam auriculato alato, androclinio postice bilobulo, lobulis lateralibus rotundato-triangulis, abbreviatis, dente interjecto, processu rostellari producto oblongo.

Nächst *Cynoches chlorochilon* Klotzsch, aber durch die kurze dicke Säule völlig abweichend. Ob auch eine der wunderbaren dimorphischen Formen, welche in dieser Gattung spuken? — Chiriqui.

3. CYCNOCHES CHLOROCHILON Klotzsch in Otto u. Dietr. Allg. Gartzg. 1838. p. 225. (21. Juli 1838). Lindl. Sert. (1838) Tab. 16:

Racemo subtrifloro suberecto, sepalis ovalibus, petalis paulo majoribus falcatis, labello subsessili obovato acuto convexo basi concavo: callo clavato transverso obtuso triangulari.

Demerara. Lodd. — Maracaybo. Moritz sent 1836 to Berlin.

Differs from C. ventricosum: flowers larger, raceme shorter and less graceful, sepals and petals broader and not so acute, especially in the form of the lip, which is nearly sessile, obovate, and acute, not ovate, and acuminate, green, not white, whith the broad green callosity at the base far larger and differently formed. Raceme springs from the upper part of the stem, bears usually 3 flowers of an uniform, yellowish green colour, 3" diam., nodding by their wight. Lateral sepals oblong, narrowed to the point, not acuminate, a little longer than the labellum, at the back of which they are slightly falcate with their concave edge next the lip, towards which they are turned; so that the flower has its parts expanded in 2 opposite directions; the lateral sepals, petals, lip upwards, and the intermediate sepal downwards. The lip stands erect at the back of the flowers, about 2½" long, 1¼" wide in the broadest part: texture firm and fleshy, colours deep green at the base, and an yellowish green every where else; in form it is widest and very convex a little above the middle, from which it is regularly ovate as far as the point; below the middle it narrows, and becomes concave with thick, broad, elevated edges and at the base it is contracted into a very short thick fleshy unguis; above the unguis, and across it, is seated a thick, green, somewhat triangular, but rounded callosity, scarcely a quarter of an inch deep. The column is about an inch and ¾ long, very slender, green, wide at the base, tapering through the greater part of its length and flattened out at the apex, where it terminates in 3 narrow fleshy teeth curved over the back of the

anther, the middle one being the narrowest; it bends away from the lip so gracefully, that the 2 taken together almost describe the segments of a circle.

Rchb. fil. Bonpl. II. 9. Caracas 4000'. Juli. Wagener.

† † Labellum in appendices solutum.

4. CYCNOCHES PENTADACTYLON Lindl. Bot. Reg. XXIX. 48. 22. Misc. 28:

Racemo brevi stricto, sepalis petalisque lanceolatis reflexis, supremo incurvo, labelli unguiculati margine revoluto dorso adnato, hypochilio cornu recto incurvo aucto, metachilio quadrilobo medio foveato laciniis 2 posticis obtusis carnosis, incurvis, anticis subulatis, apiculo linguiformi acuto laevi.

„Brasilia." Veitch.

Its lip is quite remarkable having 5 finger-like lobes and no more instead of the lateral coms-like fringes of C. maculatum.

5. CYCNOCHES AUREUM Lindl. Paxt. Fl. G. III. Tab. 75. (1852):

Racemo longo pendulo compacto, sepalis lanceolatis planis, petalis conformibus ab apice revolutis, labello brevi unguiculato apice ovato acuto disci rotundati margine in processubus brevibus arcuatis apice furcatis soluto, 2 basilaribus majoribus discretis rectis, columna labelli longitudine.

Whole coloured, pale clear yellow. — Am. central. — Lem. Ill. 264.

6. CYCNOCHES DIANAE Rchb. fil. in v. Schl. B. Z. 1852. 636.

Perigonii phyllis oblongis acutis, cuneatis, subaequalibus, labelli unguiculati lamina cochleari basi utrinque cornu semilunato aucta, margine lobulata, lobulis denticulatis, lamina brevi lancea, nunc recurva, antrorsa sub margine elevato apicis; gynostemio gracillimo, filiformi, apice clavato, androclinio postice falculis geminis semilunatis antrorsis onusto.

Blüthenhülle carmoisin, mit braunen Punkten, Lippe weiss. Säule grün. Aehre vielblüthig, hängend, in der Achsel alter Schuppen des kleinen walzigen Stammes. Säule sehr viel länger als Lippe. Blüthen etwa so gross, wie die des Cycnoches Egertonianum, viel kleiner als die des *C. aureum* Lindl. — Mittelamerika. v. Wacwz.

7. CYCNOCHES EGERTONIANUM Bat. O. Mex. Guat. Fl. 40:

Foliis vaginantibus undulatis lanceolatis acuminatis racemis multifloris nutantibus brevioribus; sepalis petalisque subaequalibus ovatis acutis, labello columna continuo obovato margine incurvo, digitis clavatis utrinque instructo, epichilio lineari membranaceo digitis vix longiore.

Flowers chocolate colour inside, greenish outside, ground colour of the lip green, fingers tinged with purple. Column dark purple.

Guatemala. Skinner.

Bot. Reg. 1846. Tab. 46. „*C. Egertonianum* Lindl." *C. stelliferum* Lodd. (fl. pallide virentibus). Oaxaca.

8. CYCNOCHES MACULATUM Lindl. Bot. Reg. XXVI. (1840). Misc. 8:

Racemo longissimo multifloro, labello linearilanceolato, hypochilio lineari, metachilio basi cornuto glandulis utrinque teretibus elongatis genuflexis pinnatifide marginato, epichilio lanceolato membranaceo acuto margine incurvo.

Long pendulous, many flowered racemes of dull yellowish-brown flowers spotted with brown.

Lindl. Sert. Tb. 38: Mexico. Barker imp. La Guayra. — Long slender stems from the sides of which spring forth 4 long racemes, each having about 80 flowers. Leaves of Catasetum. Racemes 1½'. at the base with numerous thin leafy scales. Flower-stalks rectangular with the axis. Each flower when expanded measures nearly 3" from tip to tip of divisions; yellowish ground colour on which are distributed numerous rich brown blotches. Sepals and petals lanceolate, wavy, spreading in a starry but rather one-sided manner. Labellum continuous with the food of the column, upon which it seems as if inserted; general form linear-lanceolate. In the middle white, divided at the edge on each side into about 5 round fleshy crooked fingers spotted with purple; between the front pair of which is placed a straight fleshy horn directed backwards, greener than any of the fingers, the upper end is thin, lanceolate, acuminate, white with 3 purple spots, of which one is near the point, and the others lower down and nearly equidistant from themselves and the margin. Column very long, quite taper at the base, enlarged into a thick knob at the apex, purple, spotted with a lighter shade of the same, at the back of the anther it is extended into a lobed horn, below which the anther is inserted upon a filament. Caudic. very long, upon a large round fleshy gland. Rchb. fil. Bonpl. II. 9. Caracas. Wagener.

B. Species una melius nota.

CYCNOCHES VENTRICOSUM Bat. l. c.

a. genuinum. *C. ventricosum* Bat. Orch. Mex. Guat. 5.

b. Egertonianum. *C. Egertonianum* Bat. l. c. 40. Cf. Bot. Reg. XXIX. 1843. Misc. 117. (usque ad: „seeds." ibi ex Bateman l. c.):

„Among Mr. Skinners earliest Guatemala collection attention was particularly directed to the specimens of a plant, which to the habit of a Cycnoches joined the long pendulous stems of a Gongora and for the possession of which in a living state, no small anxiety was entertained. Some plants were speadily transmitted by Mr. Skinner, but these on flowering, proved to be merely the old C. ventricosum. A mistake was of course suspected, and Mr. Skinner, being again applied to, sent over a fresh supply of plants, for the authenticity of which he vouched; but these were scarcely settled in the stove, when flowers of C. ventricosum were again produced. Mr. Skinner being importuned for the third time, and being then on the point of returning to this country, determined to take one of the plants under his special protection during voyage, which, flowering on the passage, seemed to preclude the possibility of further confusion or disappointment. The specimens produced at sea were exhibited and the plant itself placed in the stove at Knypersley, where it commenced growing with the utmost vigour. The season of flowering soon arrived, but brought with it a recurrence of the former scene of astonishment and vexation, for the blossoms, instead of those of the covoted novelty, were not distinguishable from the old C. ventricosum.] These were still hanging to the stem, when the inexplicable plant sent forth a spike of a totally different character, and which was, in fact, precisely similar to the specimens gathered in Guatemala, and to those produced on the voyage. It is, at present, impossible to attempt any explanation of so strange a phenomenon especially on the supposition, that the two forms of flowers are analogous to the ♂ and ♀ blossoms of other tribes, for C. ventricosum alone not unfrequently perfects seeds." — The plant here alluded to is a Cycnoches, which at one time bears large green flowers, in a short spike, with broad flat sepals and petals and a convex white ovate undivided labellum, and at another produces small blackish simple flowers in a very long drooping spike, with narrow sepals and petals rolled back upon the stalk, and a circular purple labellum with the edge broken up into many fingers, a lancet-shaped appendage at the point, and a kind of horn springing from the middle. These things are so totally different, that notwithstanding the strange sportings represented at fol. 1951 of this work, and the unquestionable autho-

rity of Mr. Bateman, there were many persons, well skilled in the habits of Orchidaceae, who felt convinced, that some mistake had been made, and that in reality it was impossible, that such totally different flowers could have been borne by one and the same plant. — Mr. Robert Stayner Holford Esq. of Westonbirt near Tetbury in Gloucestershire sent a flowerspike bearing flowers of Cycnoches ventricosum and Egertonianum intermixed. — Cf. Lindl. l. c. Xyl.

Obs. Forsan etiam *C. pentadactylon* Lindl. huc pertinet. Cf. Paxt. Fl. G.: „In the garden of Mr. Kenrick of West Browich this produced two flowers of C. Egertonianum among the usual flowers to itself. Sept. 11. 1852.

1418b. LUEDDEMANNIA *Lind. Rchb. fil.*

Bonpl. II. 281.

Affinis Lacaenae: recedit polliniis depresso sphaericis (bilobis?) sessilibus in caudicula minuta; qua secunda nota optime differt a genere Cycnochis. — Habitus Acinetae. Pedunculus centiflorus pendulus. Ovaria velutina. Sepala oblonga acuta fornicata. Tepala cuneato oblonga acuta. Labellum concavum a cuneata basi dilatatum, apice trilobum; lobi laterales rotundati erecti, lobus medius triangulus angustus. Discus velutinus. Dens erectus (Acinetarum ac Schlimiae more!) basi ad gynostemium appressus decurrens in carinam in medio labello divaricato bicrurem. Gynostemium gracile apice ampliatum clavatum. Margo humilis androclinii utrinque in alam brevem obtusam descendit.

1. LUEDDEMANNIA PESCATOREI Lind. Rchb. fil. l. c. Huc: *Cycnoches Pescatorei* Lindl. Paxt. Fl. G. I. 123:

Foliis coriaceis subtus glaucis, racemo multifloro pendulo, ovario tomentoso, sepalis oblongis acutis, petalis minoribus, lanceolatis, basi angustatis, labello plano trilobo medio tomentoso lobo intermedio carnosiore acuto.

Pseudobulbs 0,16 of a yard long and 0,09 broad. Leaves leathery, glaucous, lanceolate. Flowerstem hangs down perpendicularly, a yard long, with 96 flowers. Flowers 14 days. Sepals dull yellow, little brown inside; petals and lip bright yellow, 1¾ inches diam. Closely allied to Cycnoches barbatum. —

Rchb. fil. l. c. „Sépales fond jaune tachetés de pourpre. Tépales et labelle jaune pur. Hampe de 80 — 100 fleurs. Port de Peristeria.“ Ocanna. 6000'. Mai. Nr. 1194. Schlim. — Pescatorea t. 22.

Obs. Huc dicitur pertinere Cycnoches Lindleyi (nomen: G. Chr. 1851. 392.).

1419. ZYGOSTATES *Lindl.*

Bot. Reg. XXIII. 1837. sub 1927.

Sepala membranacea, libera, reflexa, petala dilatata fimbriata, sepalis multo majora, patula. Labellum cymbiforme, membranaceum, patens, basi intus cornutum aut dentatum, cum columna articulatum. Columna teres, antice excavata, basi utrinque brachio aucta lineari, apice globoso, sepalis aequali, patentissimo (stamine sterili). Rostellum longissimum subulatum arcuatum. Anthera rostrata, unilocularis. Pollinia 2, caudicula subulata, glandula minima. — Herbae epiphytae, acaules, brasilienses, racemis pendulis, floribus parvis viridiluteis.

1. ZYGOSTATES LUNATA Lindl. B. Reg. l. c.:

Dente duplici ad basin labelli, petalis lunatis.

Sepals whitish. Petals green yellow. On trees, on the highest wooded mountains of the district of Bananal in Brazil, in the midst of dense, cold fogs, which are almost perpetual. March. Descourtilz's drawings Nr. 4.

Huc: *Dactylostylis* Scheidw. in Otto und Dietr. Allg. Gartenztg. 1839. 404:

Flores racemosi. Perigonii explanati demum deflexi foliola exteriora ovata obtusa aequalia basi libera; interna unguiculata, transversa, fimbriata. Labellum cum basi columnae adnatum naviculiforme fimbriatum ascendens basi glandula lata bilobata cinctum. Columna elongata, arcuata, elastica, applanata, glandulis stipatis ad latera clinandrii, rostello longissimo ascendente. Anthera subbilocularis incumbens. Pollinia 4 ovata, caudicula plana, glandula oblonga minima.

Dactylostylis fimbriata Scheidw. l. c.:

Epiphyta foliis lanceolatis acutis carinatis margine revolutis distichis; racemis terminalibus, cernuis, floribus bracteatis, pedicellis ante anthesin deflexis geniculatis demum erectis, perigonii foliolis exterioribus viridibus, interioribus flavis labelloque albo fimbriato.

Brasilia. (Hab. typum a cl. auct. — Rchb. fil.)

2. ZYGOSTATES CORNUTA Lindl. Bot. Reg. XXXIII. 1847. l. c.

Cornu unico incurvo ad basin labelli, petalis rhomboideis.

Brazil. Prince Maximilian of Wied Neuwied.

3. ZYGOSTATES PELLUCIDA Rchb. fil. Mss. in Herb. Lindl. 1856:

Foliis a basi cuneata oblongolanceolatis apice oblique acutis, racemis multifloris cernuis rhachi alato muriculata, bracteis ovariis pedicellatis brevioribus brevi fimbriatis uninerviis, sepalis oblongoligulatis, summo apice obtusato dilatato, lateralibus apice acutis, omnibus uninerviis, tepalis ligulatis obtusatis dorso minute velutinis, supra columnam fornicatis, columnae parte mascula erecta brevi, rostello lineari canaliculato ultra medium pagina inferiori obtusangule tumido, dein lineari, anthera oblonga acuta brevi (non ut in reliquis antice acuminata), processu carnoso tripartito supposito, cruribus lateralibus ligulatis apice retusis seu obliquis, crure medio oblongo ligulato antice retusiusculo lobulato deorsum inflexo.

Flores, quam in praecedentibus minores, pallidissimi, tenuissimi. Radices adventitiae velutinae. Canta Gallo Brasiliae. Luschnath!

1420. CATASETUM L. C. Rich.

Kth. Syn. I. 330.

Obs. Eadem, quae sub Cycnoche dicta et hic valent.

I. Cataseta propria: columna biseta.

1. CATASETUM MACROCARPUM Rich. l. c. 331. Hb. Kth. N. Gen. et Sp. 631. Huc: *Catasetum tridentatum* Hook. Ex. tb. 90. 91. Sims. B. M. 155. *C. Claveringi* Lodd. B. Cab. 364. B. Reg. 840. *C. floribundum* Hook. Ex. 51. *C. tridentatum* var. sepalis latioribus, labello flavo B. M. 3329. Lindl. Bot. Reg. XXX. 1844. Misc. 40: „All parts of trop. South America east of the Andes. — It is a very common variable plant, sometimes even losing its spots, as in C. Wailesii from Honduras *).

Rchb. fil. in Bonpl. II. 19. Caracas. 2000—4500'. October bis Januar. Wagener.

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*) Quod — obiter dictum! — omnino ad C. maculatum pertinet. Rchb. fil.

2. CATASETUM MACULATUM Kunth. Syn. I. 331 Hb. Kth. Gn. et Sp. 630. LO. 155. Lindl. B. R. XXX. 1844. Misc. 40. sub 2 et 3. Huc: *Catasetum integerrimum* Hook. B. M. 3823:

Foliis oblongis latissimis apice acuminatis, sepalis petalisque acuminatis, labello cucullato crassissime carnoso ore contracto integerrimo.

α) *purpurascens:* floribus purpurascentibus, labello majore subtus obtusissimo.

β) *viridiflorum:* floribus viridibus, labello minore subtus minus obtuso.

Guatamala. Skinner. (Bedford).

Perianthium viride, labello intus flavo atropurpureo maculato, extus rubro guttato; totum perianthium guttulis rubris adspersum.

Huc: *Catasetum maculatum* Lindl. B. Reg. XXVI. (1840). 62:

Sepalis petalisque conniventibus, labello carnoso galeato basi inflexo, lateribus suis invicem imbricantibus, margine laevi, vel serrato.

α. labello basi ciliato. Bat. O. Mex. Guat. tab. 2. *C. integerrimum* Hook. B. M. 28 23.

β. labello basi laevi.

Huc: *Catasetum Wailesii* Hook. Bot. Mag. 3937:

Foliis oblongo lanceolatis, perianthiis ovatis compressis conniventibus, sepalis petalisque acuminatis, labello subconico cucullato, ore contracto integerrimo, antheris sphaerico compressis umbonatis umbone subtus squamifero.

Honduras. Skinner.

Catasetum maculatum Bat. Orch. Mex. Guat. 2.: inter alia: „labello cucullato apice unidentato marginibus ciliatis."

Sepals whitish on the outside and faintly spotted with claret colour on the inner. Petals broader, than sepals, with blotches of a clear reddish chestnut colour. Petals with blotches of clear reddish chestnut hue. Lip yellowish green, dark brown, approaching to black within.

Rchb. fil. Bonpl. 19. Caracas. 4500'. October. Wagener.

3. CATASETUM OERSTEDII Rchb. fil. Bonpl. III. 218:

Aff. C. macrocarpo Rich. labelli sacco exacte conico, ostii oblongi margine fimbriato, lamina praerupta intus sub medio antico exciso inermi.

Diese Art war uns längst bekannt, allein nach ungenügendem Materiale. Zunächst lagen vor ein paar Blüthen und Skizzen von v. Warscewicz, dann ein schönes zu Kopenhagen gefertigtes Abbild. Es blühte dort im botanischen Garten im August 1850, in von Dr. Oersted aus Nicaragua heimgebrachten Exemplaren. Blüthen so gross, wie die eines mittleren Catasetum macrocarpum Rich., grünlich mit Purpurflecken, Lippe reich purpurfleckig. Sepalen, Tepalen, Säule wie bei *Catasetum macrocarpum* Rich. — *Catasetum serratum* Lindl. hat eine weite Mündung und kurze „Cirrhi"; hier ist die Mündung eng und die „Cirrhi" sind länger als die Säule. Aus Herrn Pescatore's Garten von La Celle, cultivirt von Hrn. Lüddemann, neuerlich auch aus Berliner Gärten erhalten. — Herr Dr. Oersted sammelte die Art in Nicaragua.

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4. CATASETUM VIRIDIFLAVUM Hook. B. Mag. 4017. (1843.):

Foliis oblongis acutis, sepalis patentibus petalisque ovatis acutis concavis, labello subconico-saccato cucullato, ore contracto integro ciliato, anthera columnaque acuminatis.

It was discovered by Mr. Barclay (while employed as Government Botanist on the Pacific side of South America, in H. M. Surveying Ship Sulphur) in Central America

and sent thence to the Royal B. G. at Kew, where it flowered in the Orchid. house in summer 1842.

Perigonium viride. Labellum intus flavo pictum.

Huc: Regel Gartenflora V. 121.

Huc: *C. serratum* Lindl. cf. Walp. Ann. I. 780.

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5. CATASETUM GLOBIFLORUM Hook. B. M. 3942:

Spica elongata multiflora, perianthio globoso, sepalis petalisque subconformibus ovatis acutis concavis arctissime imbricatis, labello hemisphaerico globoso, ore contracto oblongo inferne dilatato, columnae longitudine denticulato, columpae brevis setis rectiusculis.

From Brazil: Dr. Gogarty, now a resident practitioner at Rio, sent this beautiful plant to the Glasnevin Garden. Mr. Moore informs me, that one specimen produced no less than fifteen of these singular flowers.

Perigonium brunneum, viridi marginatum et adspersum. Labellum viride, intus et margine extus violaceo rubroque maculatum.

Bot. Reg. XXVIII. 1842. Misc. 48:

Very much like C. Hookeri and perhaps a variety of it. The sepals and petals are olive brown, and, closely applied to a glaucous, globular labell, the greater part of which is uncovered.

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6. CATASETUM LURIDUM L. O. 156. Lindl. Bot. Reg. XX. 1835. 1667:

Caulibus defoliatis angustis sulcatis, perianthio subgloboso parum maculato, sepalis petalisque oblongis apice rotundatis, labello cucullato carnoso mutico apice paulo producto truncato, racemo brevi nutante.

Caules deflorati angusti, cinerei, sulcati, 3—5 uncias longi.

Folia plicata, subundulata, acuminata. Racemus vix pedalis, apice nutans, pauciflorus, bracteis breviter canaliculatis obtusis. Perianthium globosum sepalis petalisque herbaceis, oblongis, apice rotundatis maculis quibusdam pallidis notatis. Labellum carnosum, cucullatum, lutescens, antice truncato subemarginatum, marginibus atropurpureis maculatis nec ciliatis, nec dentatis, nec inflexis. Columna bicirrhosa generis.

Bahia etc. Brazil.

Huc: *Catasetum luridum* Lindl. Hook. Bot. Mag. 3590. — *Anguloa lurida* Lk. Verhandl. des Vereins pp. I. p. 289. t. 6.

Huc: *Catasetum abruptum* Hook. B. M. LXVIII. 3929:

Pseudobulbis oblongis compressis vaginis foliorum tectis, foliis lato lanceolatis, racemo oblongo nutante, perianthio compresso-globoso, petalis sepalisque subrotundo ellipticis arcte imbricatis, labello magno carnoso trilobo lobis lateralibus abruptis intermedio (seu apice) breviter producto truncato emarginato.

Huc: *Epidendrum ollare* Fl. Flum. IX. t. 5. *Catachaetum lituratum* Hffg., *squalidum* Hffg., *craniomorphum* Hffg., *turbinatum* Hffg., *purpurascens* Hffg.

7. CATASETUM OCHRACEUM Lindl. Bot. Reg. XXX. 1844. Misc. 55:

Sepalis petalisque ovatis secundis, labello cucullato integerrimo laevi, apice in rostrum breve latum obtusum carnosum contracto, cirrhis brevibus.

In the way of C. luridum with deep yellow ochre-coloured flowers. The lip is hooded, but contracted at the point into a kind of beak, thick at the edges and short. Hartweg sent it, to the Hort. Soc., from the Hacienda del Hospicio, in the prov. of Bogota.

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8. **CATASETUM PURUM** C. G. Nees und Sinning Pl. in hort. Bonn. nutrit. tab. 1. Huc *C. semiapertum* Hook. Ex. Fl. III. 213. — B. Mag. 3398. — Lindl. B. Reg. XX. (1835). 1708 (*Catasetum semiapertum* Hook):

Foliis oblongo-lanceolatis undulatis racemo compacto longioribus, perianthio subpatente secundo: laciniis lanceolatis, labello apice incurvo cucullato marginibus ciliato denticulatis.

Habitus, pseudobulbi et folia C. tridentati. Flores diversissimi, odorati, herbacei, immaculati, sepalis petalisque anguste lanceolatis, saepius dependentibus ob labellum posticum. Labellum subcompressum, carnosum, lobo apicis rotundato incurvo, lateralibus cilia tenui, denticulata tamen, marginatis.

Brazil.

Bot. Reg. XXX. 1844. Misc. 40:

Foliis oblongo-lanceolatis multiplicatis racemo compacto longioribus, perianthiis subpatentibus, labello galeato apice incurvo; lateribus denticulatis.

Flowers small, green, whole coloured.

9. **CATASETUM HOOKERI** Lindl. Bot. Reg. 840. Coll. Bot. tab. 40:

Racemo foliis trinervibus altiore, labelli lobo medio incurvo retuso; lateralibus erectis dentatis, sepalis ovalibus acutis nervosis in globum conniventibus.

Obs. Equidem plantam non noveram, nec unquam intellexi ex...... descriptione Lindleyana. In specimine libri citati, Coll. Bot., quod Dresdae exstat in Bibliotheca regis Frederici Augusti, tabulam 40 non reperi. Ex cl. Lindl. (Bot. Reg. XXX. Misc. pag. 34.) Catasetum globiflorum Hook., pulchre illustratum in Bot. Mag. 68. 3942, esset prope idem: „Much like C. Hookeri, and perhaps a variety of it." Inde mihi numquam in mentem venit, hanc cum C. semiaperto criticam. Inde ipsissimam plantam ipse denuo sub nomine C. tristis descripsi. Ceterum moneo, me iconem Cataseti puri authenticam non vidisse.

Huc: *Catasetum triste* Rchb. fil. Bonpl. III. 218: *C. Hookeri b. triste* Rchb. fil. Mss.:

aff. C. semiaperto Hook. labello depresso, calceiformi, trilobo, lobis lateralibus basi altissime semicordata gynostemium humile amplexantibus, omnino integerrimis, lobo medio abbreviato erecto humillime transverse subquadrato, medio emarginato sinum panduratum inter lobos laterales a basi claudente, androclinii apice brevissimo.

Racemus quinqueflorus. Bracteae squamaeformes minutae. Sepala oblonga apiculata. Tepala subaequalia basi cuneata, medio dilatata. Gynostemii brevissimi triangulum anticum in androclinio atrosanguineum. Aus Mexico von Herrn Consul Schiller eingeführt.

Obs. Catasetum Milleri Loddig. Cf. Bot. Reg. XXIV. 1838. Misc. 149:

Under this name given is compliment to Dr. Miller of H. M. ship Victory, a most zealous collector of rare plants, Mr. Loddiges has distinguished a Catasetum from Brazil, with a stem 2' high, and dull purple spotted flowers with a half green lip, but otherwise very like C. semiapertum.

10? **CATASETUM VIOLASCENS** Rchb. fil. v. Warscew. Bonpl. II. 97:

aff. C. Russeliano racemo secundo, sepalis tepalisque lanceolatis acutis, labello trilobo, lobis basalibus rotundatis erectis supra calcar conico saccatum, lobo medio ligulato acuto, toto limbo denticulato.

Blüthen verwaschen violett, Lippe innerlich gelb. Cordilleren bei Huancabamba. v. Warscewicz.

11. CATASETUM ATRATUM Lindl. Bot. Reg. 1838. XXIV. Misc. 114:

Racemo decurvo, sepalis petalisque patentibus ovatis acutis, labello carnoso cucullato margine tenui pectinato apice rotundato deflexo crasso denticulato.

A curious dark-flowered species obtained from Brazil by Mr. Loddiges.

Bot. Reg. 1838. XXIV. T. 63: Had this been known when the now aboblished genus Myanthus was proposed, that error would not have been committed, for the species is neither exactly a Myanthus, nor exactly a Catasetum.

Bot. Reg. XXX. 1844. Misc. 40: Flowers deep green outside; sepals rich purple inside; petals spotted with the same colour; lip dull green, fringed, with a yellow recurved flap at the end.

12. CATASETUM PLANICEPS Lindl. Bot. Reg. 1843. XXIX. 9:

Sepalis petalisque ovatis conniventibus, labello carnoso galeato rotundato, compresso, apiculato indiviso margine serrato.

Spanish Main. Loddiges.

Huc: *Catasetum recurvatum* Lk. Kl. Otto Ic. pr. II. 105. t. 42. Guiana: Orinoco Villa Upato.

13. CATASETUM PORIFERUM Lindl. Bot. Reg. 1838. XXIV. Misc. 164:

Labello plano cordato ovato truncato crenato, lobo apicis elevato carnoso, ovato, medio nectarifero dente baseos ovato incurvo, columna cirrhosa.

Demerara. Schomburgk. Loddiges. General appearance, growth of Catasetum deltoideum like which its flowers are richly spotted with deep purple broken fasciae, closely arranged upon a clear green ground. The difference between these two species resides in the lip, which in the present is dull green, nearly flat, deeply cordate, truncate at the apex, with an obscurely crenated margin, at its base is an elevated yellow tipped broad tooth, and at its apex an ovate, yellow, fleshy, elevated lobe, in the middle of which is a pore secreting honey. The sepals are oblong, the petals narrow lanceolate, the column just as in C. deltoideum.

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14. CATASETUM CALLOSUM Lindl. Bot. Reg. 1840. XXVI. Misc. 183:

Petalis concoloribus lineari-lanceolatis, sepalo dorsali conformi suppositis, labello ovato-oblongo obtuso basin versus saccato supra saccum callo magno (aurantiaco) instructo margine obsolete crenato, columnae acuminatae cirrhis vix ultra callum extensis.

Habit of Catasetum tridentatum var. floribundum, flowers quite diff. Petals and sepals of a dull reddish brown, without spots; the column is of the same colour, which may perhaps be best compared to that of old spoiled port wine. Lip green, flat, with a yellow tubercle near the base above the hollow, and a stain of the same colour near the apex. La Guayra (no 553) Loddiges.

Huc: *C. Lansbergii* Lindl. Paxt. Fl. G. I. 156. (Rchb. fil. in Walp. Ann. I. 782):

A terrestrial stove Orchid from Caracas, with a long ovate raceme, of 14—20 green and purple flowers. Leyden. Very nearly the same as C. callosum, from which it differs in the flowers being green, spotted with purple, and whole coloured. It can scarcely be a distinct species.

Catasetum callosum var. *crenatum* Regel Gartenfl. V. 275.

Rchb. fil. Bonpl. II. 19. Caracas. 4500 — 5000'. Juli bis November. Wagener.

15. CATASETUM TRULLA Lindl. Bot. Reg. 1840. XXVI. Misc. 176. XXVII. Tab. 34:

Sepalis petalisque patentibus ovalibus planis, labello late ovato acuminato obtuso subcordato concavo fimbriato apice laevi, columna brevi cirrhata.

Flowers about 90 in a spike, with a brown stain upon the lip. Very distinct. Comm. by Mr. Rigby of the Stanhope Nursery, old Brompton.

Perigonium viride, labellum medio brunneum basi albidum.

Trop. America.

Huc: *Cypripedium Socco* Fl. Flum. IX. 65.

16. CATASETUM FIMBRIATUM Lindl. Paxt. Fl. G. I. 124. Xyl. 84. (*Myanthus fimbriatus* Morr. Ann. Gand. 231):

Racemo cernuo multifloro, sepalis petalisque linearibus acuminatis, lateralibus longioribus, labello plano cordato membranaceo dentato vel basi saccato conico, dente prominente in discum.

Habit of Catasetum cernuum. It is said to have obtained an extra gold medal at the national Hort. Exhib. at Brussels 1818, when „pendant trois jours plus de 100000 yeux se fixèrent sur cette étrange et admirable gynandre, dont le parfum embaumait la salle". — In this country people would have hardly remarked it.

Two varieties: green and white; rose and yellow.

17. CATASETUM TRIODON Rchb. fil. in Otto Hamb. Gartenztg 1857. 313.

18. CATASETUM DELTOIDEUM Lindl. B. Reg. XXVII. 1840. Misc. 157. Huc: *Myanthus deltoideus* Lindl. B. Reg. 1896:

Labello imberbi sagittato triangulari, angulis posticis rotundatis apice dilatato calloso margine recurvo basi tuberculato.

British Guiana. — Hook. Bot. Mag. 3928. Sepala et tepala viridia brunneo guttata. Labellum disco viride, violaceo maculatum, lobi laterales violacei.

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19. CATASETUM LANCIFERUM Lindl. Bot. Reg. XXVII. 1841. 5. fig. 5:

Petalis maculatis linearilanceolatis sepalo dorsali conformi suppositis, labello subcordato ovato fimbriato basin versus saccato sub sacco cornu tripartito instructo, sub apice lamina lineari-lanceolata aucto, columnae cirrhis vix columna longioribus.

A Brazilian species, for which I am indebted to the Hon. and Very Rev. Wm. Herbert. Coll. by Gardner in Brazil Var. of barbatum, but very different in its lip.

Sepalum supremum et tepala rosea, sepala lateralia violacea, columna albido virens, labellum albidum, medio flavum

Bot. Reg. XXX. 1841. Misc. 40. Very like C. cristatum, but the margin only of the lip is broken up into fringes; and at the point is a broad lancet-shaped spine.

20. CATASETUM (MYANTHUS) CORNUTUM Lindl. Bot. Reg. XXVI. Misc. 182. XXVII. 5. fig. 2:

Petalis maculatis lineari-lanceolatis, sepalo dorsali conformi suppositis, labello subcordato ovato basin versus saccato supra saccum cornu valido inflexo instructo, processibus teretibus rigidis fimbriato, basi dentato, columnae acuminatae cirrhis cornu labelli attingentibus.

Demerara. With the habit of Catasetum barbatum, 16 and more flowers in a raceme of dull green, richly spotted with deep blackish purple. The lip is light green, spotted with the same dark colour; above the base it is hollowed out; above the hollow it is furnished with a strong inflexed white horn, which rises from a somewhat rugged base; and the margin is broken up into slender stiff processes, which are evidently an incomplete state of the fringes found on the lip of Catasetum cristatum, barbatum.

21. CATASETUM CRISTATUM Lindl. Bot. Reg. t. 966. B. R. XXX. Misc. 40:

Foliis oblongo lanceolatis, perianthiis explanatis, sepalo supremo petalisque conniventibus, labello fimbriato cristatoque expanso cristae pilis crassis lucidis compressis obtusissimis emarginatisque simplicibus.

Brazil.

Both this and the last (barbatum) have a strong smell of Tarragon; they are probably varieties from each other.

Monstrous State. — Has been found to sport into C. tridentatum; see B. R. 1951.

22. CATASETUM BARBATUM Lindl. B. Reg. XXX. 1844. Misc. 44:

Petalis versus apicem serratis, labelli infra medium saccati margine pilis tenuibus succulentis albis longe fimbriato apice anguste attenuato recurvo supra ad basin spina tripartita, infra apicem spina magna dentata porrecta, cristae pilis opacis subulatis apice saepe bifidis per paria tria quatuorve basi connatis.

Brazil. Demerara.

Sepals and petals narrow, green, blotched with purple. Lip green or pink, with narrow delicate fibres arising from its margin. No doubt the supposed species quoted above are mere varieties of the same natural form.

Huc: *Myanthus barbatus* Lindl. B. Reg. 1778. *Myanthus barbatus* v. *labello albo* Hook. B. Mag. 3514. — *Catasetum spinosum* Lindl. B. Reg. XXIV. Misc. 136. *Myanthus spinosus* Hook. B. Mag. 3802.

var. *proboscideum* Lindl. Bot. Reg. 1841. XXVII, 5. f. 3: I confess my inability upon a formal examination of it, to distinguish it specifically from C. barbatum. It is a different looking plant, owing to the beard of the lip being green and not pink.

Huc: *Catasetum proboscideum* Lindl. Bot. Reg. 1839. XXV. 140:

Labello deflexo multifido; laciniis filiformibus laceris; columna apice proboscidiformi: cirrhis deflexis columna longioribns.

Georg Wailes Esq. of New-Castle, who received it from Mr. Gardner, marked „Nr. 2, new, found growing on a small species of Palm, near Sertao". The plant is nearly related to Catasetum cornutum and barbatum, from which its deeply lacerated lip, and the longer proboscis of the column, seem to distinguish it; it may however be a mere var. of the latter species, like C. trifidum in growth.

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23. CATASETUM CERNUUM. Huc: *Myanthus cernuus* Lindl. Bot. Reg. XX. 1835. 1721:

Racemis elongatis cernuis, multifloris, sepalis petalisque lanceolatis convergentibus, labello transverso plano alte trifido, lacinia intermedia minore.

Brazil. Trinidad.

Flowers green with a few purple spots.

Huc: *Catasetum trifidum* Hook. Bot. Mag. 3262:

Floribus maculatis, petalis duobus cum sepalo supremo conniventibus, labello patentissimo plano trifido, segmentis lateralibus acuminatis, intermedio crasso obtuso breviore.

Perigonium viride, brunneo punctulatum.

Glasgow Bot. Grd. is indebted to Mr. Lockhart for that species, who sent the living plant from Trinidad.

24. CATASETUM BICOLOR Klotzsch in Otto und Diettrich Gartenz, 1854. 337:

Pseudobulbis fusiformibus articulatis foliosis; foliis amplexicaulibus elongatis acuminatis plicatis cum vaginae attenuatae apice articulatis; racemo laxifloro pendulo basilari brevipedunculato pallide-viridi; pedicellis germinibusque-sanguineo-purpureis nitidis patentibus; perigonii foliolis pallide purpurascentibus angustis acutis, exterioribus campanulatim incurvis, extus convexis, intus concavis, interioribus latioribus lanceolatis divaricatim subrecurvis planis; labello cyathiformi galeato parvo nudo, extus candido, intus versus marginem roseo-punctato trilobo, lobis lateralibus elongatis obtusiusculis erectis, medio profunde-

tridentato, dentibus erectis acutis; columna pallide purpurea rostrata, basi bicirrhosa; anthera lutea.

Rchb. fil. Bonpl. III. 218:

Flore Cataseti callosi, labello tamen minuto conico saccato ante basin utrinque revoluto, limbo inaequaliter quinquedentato; ima basi utrinque antrorsum unicornuto.

Blüthenhülle rothbraun mit Stich ins Olivengrüne. Lippe ⅙ Zoll lang, weiss, purpurn gesäumt; am Grunde und innerseits auf den obern Zähnen fein purpurn querstreifig. Auch die zwei kleineren, nach vorn gerichteten Hörnchen am Grunde der Lippe purpurn bandirt. Wir erhielten diese kleine Curiosität gleichzeitig mit dem Hrn. Autor und erkannten sie ebenfalls als neu. Sollte sie — worauf man bei fast jedem Catasetum gefasst sein muss — eine Form einer bekannten Art sein, so könnte sie sich als Hemmungsbildung mit kappiger Lippe des *Catasetum trifidum* Hook. (*Myanthus cernuus* Bot. Reg. 1121) erweisen. Die Lippe hat ähnliche Elemente. Von Hrn. v. Warscewicz 1853 eingesendet.

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25. CATASETUM NASO Lindl. Bot. Reg. XXIX. 1843. Misc. 111:

Spica brevi erecta, sepalis oblongo lanceolatis complicatis petalisque lanceolatis ascendentibus aequalibus, labello hemisphaerico apice abrupte in appendicem carnosam ovatam obtusam producto, marginibus basi tenuibus laceris amplexicolumnibus, linea intramarginali carnosa inflexa connivente aperturam cordiformem efficiente, columna bicirrhosa.

Caracas. Linden. Received by Rucker.

Alabastrum might be mistaken for C. tridentatum. Sepals and petals very pale dull green outside, are slightly pink inside, richly spotted in irregular bars, with a deep crimson purple. Lip viewed from the side has a hemispherical form, green, except at the base, where it is extended into a black-purple lacerated margin embracing the column, and at the point, where it is extended into a long flat horn or nose. Seen in front it is wholly of the same rich black purple and looks as if it were a solid hemisphere pierced in the middle with a large heart-shaped hole, but this appearance is owing to a thick fleshy rim, which rises from within the true edges of the lip, and directing itself inwards horizontally with an uneven outline, at last touches in front of the column, and produces the appearance of a junction. Flowers have no smell.

26. CATASETUM SANGUINEUM Lindl. Paxt. Fl. G. II. p. 168. n. 445. Xyl. 225.

Sepalis petalisque oblongis acutis secundis, labello carnoso subrotundo rostrato serrato et lacero basi fimbriato fovea alta triangulari in medio.

„Pseudobulbs 6—7". Light glaucous leaves. Flowers in a close raceme not at all handsome. Differs from Catasetum saccatum in having much smaller flowers, with sepals and petals turned upwards, the lip more lacerated, than fringed, except quite at the base, and the opening of the pouch triangular without ribs instead of being crescentshaped with very conspicuous elevations on the side and next the base. — *Myanthus sanguineus* Linden. Greenish flowers, speckled with brown or dull red.

Pescatorea t. 14. — Huc: Hook. B. M. LXXX. 4792. „*Catasetum Naso var.*"

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27. CATASETUM SACCATUM Lindl. Bot. Reg. XXVI. 1840. Misc. 179:

Sepalis lanceolatis patentibus dorsali petalisque fornicatis, labello subrotundo abrupte acuminato fimbriato medio saccato; ostio contracto reniformi postice dentato, columna cirrhata.

Most extraordinary! It has very large flowers, with rich purple spotted sepals and petals, and a bright yellow lip covered closely with crimson dots. The latter is

pierced in the middle by a narrow aperture, which leads into a conical chamber or bag, which is not observed till the back of the lip is turned up. Lodd. obtained it from Guayana.

Lindl. Sert. Orchidaceum 1841. tab. 41: Foliage as in others. Flower stems 12—15 ' high, 7—8 flowered. Flowers full 4" diam: at first erect, bent down towards the point. Sepals lanceolate equal, spreading, inside deep purple, spotted with yellow, outside tinged with yellow. Petals of the same form and nearly the same size, but are thinner in texture, more spotted with yellow, and at first form an arch over the column, but after the flower has been for some time expanded, they spread back even more than the dorsal sepal. The lip is of a most irregular form and rich yellow, thickly sprinkled with crimson dots; in form it is roundish ovate, with a contraction on each side, and a gradual tapering to the point; all round it is bordered by long fringes; in the middle is a callous perforation, kidney shaped in front, slightly lobed and warted at the back; this perforation opens into a small bag-shaped chamber, which projects below the underside of the lip. At first the lip is flat; but it soon turns back at the point, so that at last it is bent in the middle at almost a right angle and hides the conical chamber already described.

Huc: *Catasetum* (*Myanthus*) *incurvum* Klotzsch in Otto und Dietrich Allg. Gartzg. 1854. 178:

Pseudobulbis magnis cylindricis fusiformibus articulatis, foliis ...., racemo paucifloro pseudobulbum paululum superante, perigonii foliolis exterioribus patenti incurvis virescenti fuscis anguste lanceolatis acuminatis, margine involutis, interioribus brevioribus viridi purpurascentibus strictis erectis, margine recurvis; labello saccato ovato acuminato flavoviridi, infra apicem obsoletissime bilobo, antice purpureo maculato, marginibus lateralibus acute dentatis magis deflexis; columnae cirrhis vix columna longioribus.

Peru. Warscewicz. Matthieu.

Es leidet keinen Zweifel, dass die Blüthenform, namentlich die Form des Labellums, so sehr von der aller übrigen Arten abweicht, dass die Aufstellung einer neuen Species, die im System zwischen *Catasetum saccatum* und *Catasetum callosum* zu stehen kommt, durchaus gerechtfertigt erscheint.

Huc: *Catasetum incurvum* Klotzch Gard. Chronicle 1855. 4. c. Xyl.:

Whether it is a monster, as it well may be, or merely a gigantic form of C. saccatum itself, we are unable to say. No one indeed in the present state of knowledge can pretend to form a positive opinion as to what are natural, what monstrous, what permanent, what accidental states of the genus Catasetum. The best service that can in the meanwhile be rendered to science, is to publish figures of the flowers of as many forms, larvae, species, or whatever they may prove to be as appear to be different from each other.

Lord Bishop of Winchester. v. Warscewicz.

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28. CATASETUM TABULARE Lindl. Bot. Reg. XXX. 1840. Misc. 40. pag. 35:

Vegetatione, sepalis petalisque omnino C. laminati, labello oblongo antice concavo basi cornuto fimbriato extus sub apice lineis serrulatis elevatis striato secus medium crista tabulari lata transversa corrugata antice dentata aucto.

Granada.

This is very like the Guatemala C. laminatum, but the structure of the lip is different. In place of the thin knife-like crest of that species, there is a broad raised oblong fleshy table of a yellowish brown colour, closely wrinkled across and broken up into asperities, which, at the front of the table where it forms a kind of cliff above the lip are extended into strong teeth. On the outside of the lip near the point

the veins are raised and somewhat toothed. The colour and size of the flowers are much the same as in C. laminatum.

29. CATASETUM LAMINATUM Lindl. Ann. Nat. Hist. IV. 1840. 384. Bot. Reg. XXX. 1844. Misc. 40:

Labello lanceolato basi saccato apice marginibusque incurvo basin versus fimbriato, per axin lamella unica carnosa alta integra vel denticulata, basi biloba instructo, columna cirrhata.

Mexico.

Flowers spread open, large, purple, or greenish spotted with that colour. Lip sometimes pure white, sometimes speckled with purple, with a deep plate running along its middle from end to end.

Lindl. Sert. (1840) tab. 38:

Var. 1. maculatum: labello, columna petalisque purpureo-fusco maculatis.

Var. 2. eburneum: labello eburneo columna petalisque immaculatis.

Inflorescence: nodding, many flowered raceme, proceeding from the base of the pseudobulb. Sepals narrowly lanceolate and acuminate, of a greenish purple colour, which varies in intensity in different specimens; the uppermost is pressed close to the petals, the two side ones are turned back till they touch each other. Petals are thin, pale pink, stained with dull purple, rather broader than the upper sepal, with which they are parallel, so as to form a kind of arch over the column, but not touching it; sometimes however they separate and fall backwards towards the lateral sepals or simply spread away from the column: such was the case in the original of the drawing so that it has at one time parts of the aboblished genus Myanthus and at another a disposition peculiar to itself. Lip of a new form to this genus. Lanceolate outline hollowed at its base into a deep pouch; edges and point curved inwards along the margin, towards the base it is bordered by a fine fringe of slender hairs. From the front edge of the pouch to nearly the apex is carried a fleshy plate, planted perpendiculary upon the lip and from 4—5 lines deep, which, next the pouch, divides into 2 lobes, but otherwise is perfectly entire except on the upper edge, which in some varieties is unequally toothed. Colour in the figured pale greenish pink, spotted with dull but deep purple, in a plant of Horticultural Society Garden ivory white eventually changing to cream colour. Column is spotted in the variety, with a spotted lip, nearly plain in that with the white lip. Found but by Karwinski and Hartweg near Oaxaca.

Lindl. in Benth. Pl. Hartweg. 72: in montibus Tuquila Mexici. Hartweg.
Catasetum laminatum var. *eburneum:* Bot. Reg. XXVII. (1841) 5. fig. 4.

II. Monachanthus: columna ecirrhata, saepe antice angulata.

(Monachanthus Lindl. Bot. Reg. 1538.)

30. CATASETUM RUSSELIANUM Hook. Bot. Mag, 3777. (N. S. XIII.) 1840:

Pseudobulbo elliptico magno, foliis lato lanceolatis, racemo amplo, labello submembranaceo antice inflato ore contracto margine anteriore producto undulato fimbriato disco membrana cristato, columna nuda (ecirrhosa).

Woburn Abbey: sent on the day of the death of the possessor of that beautiful Garden. — Guatemala 38. Skinner.

Perianthium viride labello albovirente.

31. CATASETUM LONGIFOLIUM Lindl. Bot. Reg. XXV. 1839. Misc. 154:

Foliis longissimis gramineis, racemo cylindraceo pendulo multifloro, sepalis ovatis subrotundis petalorum conformium dorso applicitis, labello urceolari a tergo incurvo limbo truncato apiculato intus cereaceo glabro margine fimbriato.

Demerara. Henry Gloster. It is known as „the long leaved Catasetum, which never flowers." It has however at last yelded to the good management of Valentine Morris Esq. of the Retreat, Battersea, where it has produced its blossoms abundantly. The flowers are bright orange, a little bordered with violet, and appear in a drooping raceme, over which they are closely packed for the length of a foot or more; they are extremely beautiful and the species is beyond all comparison the handsomest of the genus.

Lindl. Sert. tab. 31: „In the Camuni Creek, a tributary of the river Demerara; afterwards frequently at the low and marshy ground of the rivers Wironi and Wicki, tributaries of the river Berbice, where the Mauritia Palm is so numerous, that it occupies large tracts exclusively. 6—8' leaves. Macusi call it Massamug Warraus Ohitryon." Schomburgk. — Leaves week, 3ribbed, grassy, hang down from the Palms. Raceme 1' foot long, from the base of the pseudobulbs, 20—30 flowered. Sepals and petals shaped and coloured alike; roundish, tapering at the point, where they are stained with purple, otherwise green. Sepals twisted in such a manner, as to be placed exactly at the back of the petals. Labellum very fleshy, cupshaped, rather bagshaped, curved backwards at its end, firm, fleshy, about 1" diam. at the brim, deep orange running into crimson at the edge, a little rugged on the outside, smooth and waxy in the inside. Column very short, sligthly extended in front into two short horns but destitute of cirrhi; at the back it terminates in a rounded manner at the line of origin of the anther. Huc: B. M. 3819.

32. CATASETUM DISCOLOR Lindl. B. Reg. XXX. 1844. pg. 34:

Racemo laxo multifloro, labello hemisphaerico marginibus planis medio fimbriatis.

Flowers in a loose erect raceme, dull pale purple, with the inside of the lip yellow. *Monachanthus discolor* Lindl. Bot. Reg. 1735. *Monachanthus discolor* β. *viridiflorus* Hook. Bot. Mag. 3601. Idem γ. *Bushnani* Hook. l. c. fig. A. *M. Bushnani* Hook. B. M. 3832. — *Monachanthus fimbriatus* Gardn. B. M. 3708: labello longissime fimbriato intus pubescente. — Dry sandy banks beneath the shade and some low shrubs, beyond the village of Apipucas, about two miles from Pernambuco.

33. CATASETUM ROSEOALBUM Hook. B. M. t. 3796. (*Monachanthus roseoalbus*: it might with greater propriety be called Catasetum sect. Monachanthus):

Labello triangulari acutissimo concavo hemisphaerico (non ventricoso) intus pubescente margine basi longissime ciliato. Para.

Obs. A cl. Lindley in B. Reg. XXX. l. c. sub *C. discolori* citatur. Retinui ob variam labelli basin et maxime ob tepala serrulata. Rchb. fil.

34. CATASETUM WARSCEWICZII Lindl. Paxt. Fl. G. I. 45. n. 74. c. Xyl. 29. Cf. Walp. III. 545. As a species it is perfectly distinct from all others. The flowers, which grow in close pendulous racemes, consist of roundish ovate sepals and petals, and a helmetted lip, which spreads in two diverging fringed halves. They are pale green with bright emerald green veins and though not gaudy, are extremely petty. Fragrant.

35. CATASETUM FULIGINOSUM Lindl. Bot. Reg. XXVII. 1841. Misc. 168:

C. tridentati vultu, sepalis petalisque oblongis acutis reflexis, labello cucullato carnoso integerrimo vel minute serrulato patente, columna brevi ecirrhosa apice in setam producta, anthera parva (effoeta?).

Flowers at Sion in the possession of His Grace the Duke of Northumberland. Habit of *C. tridentatum,* but its flowers are in a dense erect raceme, and of a deep green colour, spotted with a dull blackish purple so as to look as if they were soiled with soot. Sepals and petals are spotted, oblong, acute and reflexed, so as to hang downwards. The lip on the other hand is fleshy, hooded, stained with pale purple, and either entire at the margin, or very slightly serrated; but it does not cover over the column as is usual in the hooded Catasela, on the contrary it spreads away at almost right angles. The column itself is short, deep green, and produced at the point into a straight bristle in front of which is placed a small and imperfect anther. In this mesquine genus it is impossible to say, what is a species and what is not. Judging from the evidence we possess concerning C. tridentatum, cristatum, and viride, we should suspect it to be a male form of C. atratum, or some such species. That however must remain for future enquiry.

36. MONACHANTHUS VIRIDIS Lindl. B. Reg. XXI. 1836. 1752:

Racemo multifloro, labello oblongo cuspidato margine laevi, sepalis petalisque rigidis ovatis.

Flores carnosi herbacei, labelli margine vitellino. Sepala ovata, acuta, rigida, petalis parallela. Petala conformia, sed latiora et maculis quibusdam purpureis obscuris notata. Labellum posticum ventricosum, carnosum, $1^1/_2$ pollices longum, ore oblique laevi cuspidato. Columna brevis, ovata, carnosa, mutica. Planta facie omnino C. tridentati, quo foliis et caule tantum convenit ut floribus ablatis eandem diceres.

Brazil upon the trees of Corcovado.

Huc: *Cypripedium cothurnum* (Vellozo) Arrab. Flum. IX. 63.

De heteranthis Catasetis.

Jam anno 1852 in dissertatione „de polliniis Orchidearum genesi" casus quosdam attuli de heteranthis Catasetis. Tamen nullo modo garrulorum istorum instar rem explicare ausus sum.

Res primum innotuit cl. Lindley: Bot. Reg. XII. fol. 966. 1826. Aprili: „The unimportance of the peculiarity, which exists in the labellum (namely its flattened, or fringed, and crested state) is manifested in a singular manner by a curious monster of this plant, which we have observed on an individual in the Horticultural Society's garden. Among flowers of the ordinary structure two or three were observed, in which the labellum was precisely of the same nature as that of Catasetum tridentatum; that is to say, destitute of the crested appendage, and perfectly galeate and naked.

Lindl. Bot. Reg. XXIII. 1951* (1837): Racemus floribus 16, quorum 7 Myanthi cristati, reliqui Monachanthi. „Monachanthi et Myanthi proles biformis." „The monster sent by his Grace the Duke of Devonshire was produced on a plant of Myanthus cristatus, which also produced a perfect spike of Myanthus cristatus at the same time; the same plant has flowered twice before, but did not sport: a high state of cultivation appears to favour the production of monsters of this kind. There are more than twenty plants of Myanthus barbatus at Chatsworth, which are almost all different in colour, but none of them have yet sported; there are also at least twenty plants of Monachanthus discolor, which keep true. Mr. Hillhouse (a gentleman residing a Demerara), has informed the Duke of Devonshire, that a flower spike of Catasetum often has on it several distinct kinds of flowers."

To make the reader more distinctly aware of the changes that the flowers of this specimen exhibit, I will describe one of those of the species in its ordinary state. It has narrow, ovate, lanceolate, green sepals, of which the two lateral ones are placed obliquely on each side of the lip; the petals are narrow, spotted with red, and placed almost in front of the upper sepal; the lip is a narrow, flattish, fleshy

body, having a sacco conical depression (fig. 4c.) in its middle, a large, curved, white, fleshy horn (fig. 4) projecting forwards from its base, and a row of stiff, fleshy teeth standing up all round the edge. The column has a long horn rising up from its back, and forming a narrow bed for the anther, while two other horns or cirrhi (fig. 4 a.) hanging downwards over the lip.

In other flowers, which may be said to exhibit the extreme of difference, the sepals and petals are all equally spotless, of the same short, ovate, obtuse figure, and spread equally round the column: the lip is a fleshy hood-like, or helmet-like, greenish yellow body, a little turned back at the point, entirely without sac, horns or marginal teeth and standing erect, so as to overshadow the column. The column itself has an exceedingly short horn at the back, and no cirrhi in front. I think I may safely say, that until these two sorts of flowers had been seen on the racemes, no Oedipus could have guessed them to belong to either the same species or even genus. — The way in which they pass into each other is sufficiently curious, as far as regards the lip. All the fringe like teeth of this organ disappear, except a few at the base on one side (fig. 3. a), the curved horn shortens (fig. 3 b.), and the remainder contracts about the sac, which widens and deepens till the commencement of a helmet is shadowed out. In another case all the fringes disappear except a few minute bristles (fig. 1. a.), the lateral cirrhi are not formed, the curved horn is wanting, and the helmet-like form in the lip is completed. All these transitions were perfectly shewn in these in the Duke of Devonshire's specimen, and have been faithfully copied by Miss Drake. On the same specimen was also a case of a flower with two lips, as is represented at fig. 2. — The necessary consequence of this is, that the supposed genera Myanthus and Monachanthus must be restored to Catasetum, and I have no doubt now, although no proof has been seen of it, that Mormodes must share the same fate. But which of the species have their masks on, and which shew their real faces I certainly will not at present presume to guess. — Mr. Schomburgk has lately sent to the Linnaean Society, from Demerara, a specimen of another Monachanthus, sporting to a crested Myanthus, of which, I presume, some account will in due time be published. And I am acquainted with the following example of this tendency in a very different genus. — Im August 1836, Mr. Willmer, of Oldfield, near Birmingham, sent me a specimen of a Cycnoches, which had broad petals, a short column, hooded and dilated at the apex, and a broad roundish lip, gibbous at the base, and with its stalk much shorter than the column. It was, however, destitute of scent, while Cycnoches Loddigesii has, as is well known, a delicious odour of Vanilla. I had no doubt of its being a distinct species, and called it C. cucullata. But in the autumn of 1836, in the garden of the Horticultural Society, a plant of Cycnoches produced from the opposite sides of the same stem two racemes; those of one raceme were the wellknown fragrant flowers of Cycnoches Loddigesii, and of the other the scentless flowers of the new C. cucullata.

Hook. Ic. II. Tab. CLXXVII. (1837.). *Catasetum cristatum var. monstrosum :*

In regard to the present singular monstrosity some information respecting it was many months back comm. to me by Dr. Schomburgk from Demerara and the specimen was sent to Dr. Brown in London. Shortly after my friend and former pupil, Dr. Nimono favoured me with the plant here figured, preserved in spirits. In the meanwhile a fine specimen flowered at Sion House, which Prof. Lindley figured in Bot. Reg.

Lindl. Bot. Reg. XXIV. 1838. sub Tab. 63: *Catasetum :*

There is a circumstance observed by Mr. Schomburgk in a connection with them, which is very curious and deserves to be recorded. In a letter I received from him some time since, he says, alluding to Monachanthus „are you aware, that Catasetum and Myanthus are not seed-bearing, but that Monachanthus bears seed abundantly?" I do not know, what conclusion to draw from this statement, but it would be a most curious fast, if, as Mr. S. observations would appear to imply, the species of Catasetum and Myanthus should prove to be sterile states of Monachanthus.

Lindl. Bot. Reg. XXVII. 1840. Misc. 157: *Catasetum deltoideum* Lindl.

A new case of this kind of variations previously unheard of and unsuspected in the vegetable kingdom, has been observed by Mr. Dunsford', who has brought me a scape of Catasetum deltoideum fig. at 1896 of this work in a similar state of alteration. The scape itself has become 3 times as stout as usual, the length of the raceme is much reduced, the sepals and petals retain their form and colour; but the labellum instead of being arrow-headed, flat, deep purple, toothed at the base, and placed in front of the flower, has become of exactly the same form as that of Monachanthus viridis, hooded, undivided, and of a dull greenish colour tinged with dull purple. The column too, has in like manner lost its cirrhi, has shortened, and its lengthened beak has also disappeared.

Obs. Ad haec addo, monstrosa Catasela me saepius vidisse. Ipse possideo pulchrum specimen Cataseti Oerstedii mixtis floribus Monachanthi. Labella hujus non adeo saccato galeata, uti vulgo solent, sed dilatato saccata, subretusa. — Pulchrum specimen vivum obtinui ex Wildpark bei Potsdam anno 1857 et teneo siccum ac depictum. Racemus biflorus alterum florem tenet Catasoti sanguinei paulo monstrosum; alterum Monachanthi. Hic tamen etiam labelli limbo pulchre replicato, apiculato, basi serrulato, sacco basi dilatato recedit. — Cataseti callosi flores plurimum ludunt et typos valde diversos offerunt. Rchb. fil.

Obs. 1. Catasetum Pescatoreanum Lindl. sp. n. Gard. Chron. 1850. p. 162. Quid?

Obs. 2. Moneo in specimine libri Bot. Reg. universitatis Lipsiensis, iconem prolis biformis Monachanthi et Myanthi cristati non numero 1951*, sed numero 1947 esse signatam.

Obs. 3. Quid sit „*Catasetum viride,*" quod ill. Lindley affert sub Catasoto fuliginoso (cf. p. nostram 575, lin. antepenultimam), nescio. Forsan *Monachanthus viridis?* Rchb. fil.

MORMODES *Lindl.*

Nat. Syst. Bot. 2. 446. — Bot. Reg. XXII. (1836). 1861. — Bot. Reg. XXIX. (1843.) Nota sub 33.

Sepalum superius fornicatum angustum; lateralia conformia reflexa. Petala latiora conformia, erecta. Labellum sellaeforme, ascendens, trilobatum, subcuneatum, apiculatum, cum columna articulatum. Columna semiteres, mutica; gynizus longe angustus; clinandrium postice acuminatum. Pollinia 4, per paria connata caudiculae crassae affixa, glandulae carnosae crassae adhaerenti.

Habitus Cataseti.

1. MORMODES LUXATUM Lindl. Bot. Reg. 1842. XXVIII. Misc. 66. — Bot. Reg. 1843 t. 33:

Foliis longissimis angustis subtus glaucis, racemo oblongo pluries longioribus, sepalis ovato-lanceolatis petalisque oblongis concavis margine subscariosis carnosis incurvis, labello hemisphaerico concavo obsolete trilobo apiculato, supra columnam cucullato, polliniorum caudicula apice cornuto tuberculata.

Mexico.

Flowers large, as much as 3½ inches in diam.; pale lemon colour, powerfully aromatic.

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2. MORMODES AROMATICUM Lindl. Bot. Reg. XXVII. (1841.) Misc. 162. XXIX. (1843) 56:

Racemo brevi erecto, sepalis petalisque subrotundo ovatis acutis secundis concavis, labello anguste cuneato convexo lacinia intermedia triangulari acuminata cucullata. Mexico.

This has flowers with a pale pinkish ground sown thickly with dull wine red specks, and a powerful odor like that of aromatic vinegar. It differs from the M. pardinum in the small size of its flowers, and the very dissimilar form of the lip and floral envelopes.

Perigonium viridiflavum, atropurpureo guttatum.

Bot. Reg. XXVII. 1841. 162: Columnae dorso subulato.

I can hardly say, whether this is really distinct from M. pardinum, not having a specimen at hand for comparison.

3. MORMODES BUCCINATOR Lindl. in Bot. Reg. XXVI. 1840. Misc. 9:

Racemo stricto oblongo, sepalis lineari-oblongis, lateralibus reflexis, dorsali petalisque ovato lanceolatis erectis, labello unguiculato carnoso nudo subrotundo cuneato apiculato utrinque emarginato lateribus in buccinae formam revolutis. Mexico.

Flowers pale green, with an ivory white lip, whose sides are so rolled back as to give it the appearance of a trumpet. The column is twisted some times to the right, sometimes to the left. The habit and general appearance of the flowers, except in colour, that of M. atropurpureum.

Bot. Reg. XXVII. 1841. Misc. 191: Mr. Lodd. obtained a variety from La Guayra, which with all the form of the original, has the flowers dull orange spotted with brown. Looks at first sight something like M. aromaticum.

L. Paxt. Fl. G. II. p. 59. N. 325: When this was first published nothing was known of its native coutry. At a later period it was said to be Mexican, upon some bad garden authority. We find it however with brown flowers among Schlims Venezuela plants; N. 67, gathered at San Cristobal at 2500 above the sea.

Huc: *Mormodes lentiginosa* Hook. Bot. Mag. 4455:

Pseudobulbis oblongis, foliis lanceolatis, striatis, scapo radicali racemoso, floribus remotis pendulis punctis infra fuscis irroratis, sepalis arcte reflexis oblongis acutis marginibus revolutis, petalis conformibus, labelli obovati lateribus revolutis, columna oblique torta apice acuminata. Central-America.

Huc: *Mormodes flavidum* Klotzsch Allg. Berl. Gtztg. 1852. 10. April.

Pseudobulbis elongatis, articulatis, marginatis, versus apicem articulatim foliosis, racemo paucifloro, pedunculato, pseudobulbo altiore, floribus flavidis, erectis, pedicellatis, bracteis oblongis obtusis, aridis albicantibus instructis, perigonii foliolis lanceolato linearibus, acutis, flavidis, tribus exterioribus arcte reflexis, binis interioribus erectis, labello albido luteo, erecto incurvo, obovato, apiculato, integerrimo, lateribus deflexis, columna oblique torta acuminata. Warscewicz.

Huc: *Mormodes vitellina* Klotzsch Allg. Gartenztg. 1853. 294:

Pseudobulbis oblongis compressiusculis subincurvis sursum attenuatis, foliis striatis membranaceis oblongis acuminatis basi conduplicatis attenuatis 5nerviis, racemo 5pollicari 4—5floro, bracteis lanceolatis acutis sessilibus alutaceis membranaceis; perianthii foliolis vitellinoviridulis, exterioribus lanceolatis acutis angustioribus patenti incurvis, internis ovatis acutis semicirculatim incurvis, labello vitellino unguiculato late obcordato trapeziformi semicirculatim incurvo apiculato, marginibus lateralibus revolutis antice superneque minus apertis, inferne convolutis, columna oblique torta acuminata e flavido albescenti.

Caracas. Wagener. Matthieu.

Huc: *Mormodes Wagneriana* Klotzsch Allg. Gartenztg. 1853. 147:

Pseudobulbis oblongis incurvis sursum attenuatoacutis, vaginis foliorum amplis im-

bricatis aridis membranaceis albidis fuscescenti marginatis, deinde evanescentibus vestitis; foliis ....; racemo subbrevi robusto, 2—3floro, basi incrassato; bracteis brevi ovatis subacutis albidis, inferioribus vaginatis, floribus e roseo sordide albidis erectis, perianthii foliolis patenti incurvis sordide virescentibus cucullato acutis, externis lanceolatis angustioribus; labello late obcordato candido apiculato, versus basin attenuato, dilute roseo, apiculo et lateribus usque ad medium deflexis, anteriori recto truncato; columna oblique torta dilute rosea acuta. Caracas. Wagener.

Huc: *Mormodes brachystachya* Klotzsch Sem. H. Berol. 1852. p. 13:

Pseudobulbis oblongis sursum attenuatis, vaginis foliorum amplis semipellucidis membranaceis imbricatis aridis pallidis fuscomarginatis deinde evanescentibus vestitis; foliis .....; racemo brevi, robusto, 2—3floro; bracteis ovatis acutis roseis; floribus flavidoluteis, erectis, perianthii foliolis virescentiluteis apice subroseis cucullato acutis arcuatim incurvis, margine plus minusve recurvis, exterioribus obovatolanceolatis angustioribus dorso carinatis, interioribus ovatis, apice obsolete carinatis; labello late obcordato, aureo, versus basin attenuato pallescenti, marginibus lateralibus revolutis, anteriori recto undulato; columna oblique torta, pallide lutescente, acuminata.

Venezuela. Wagener.

Huc: *Mormodes marmorea* Klotzsch Allg. Gtz. 1853. 290:

Pseudobulbis oblongis strictis subcompressiusculis sursum attenuatis; foliis oblongis membranaceis undulatis acuminatis quinquenerviis subplicatis, inferne attenuato-conduplicatis; racemis 6pollicaribus 4—5floris; bracteis ovatis acutis rubescentibus; perianthii foliolis rutilis lilacinopunctatis primum virescentibus, exterioribus oblongis acutis angustoribus reflexo incurvis, interioribus latioribus acutis semicirculatim incurvis, labello unguiculato latissime orbiculato reflexo apiculato carneoalbicante, supra sparsim et pallide rubro, punctato, subtus, praesertim in centro, saturate rubropunctato semicirculatim incurvo, marginibus late reflexis, inferne convolutis; columna carnea lilacine punctulata oblique torta acuminata.

Caracas. Wagener. Matthieu.

Huc: *Mormodes leucochila* Klotzsch Allg. Gtz. 1853. 289:

Pseudobulbis oblongis subcompressiusculis crassis, sursum attenuatis, vaginis foliorum amplis membranaceis imbricatis aridis e viridi albicantibus deinde evanescentibus vestitis; foliis striatis oblongis acuminatis membranaceis tricostatis tortilibus, basi attenuato conduplicatis, racemo quadripollicari 4—5floro; bracteis ovatis obtusiusculis sessilibus pallide viridibus, margine pellucidis; perigonii foliolis albido-viridibus, exterioribus angustioribus, obtusatis cucullatis brevissime acutis, magis recurvo inflexis, interioribus latioribus acutis incurvis; labello late obcordato unguiculato semicirculatim incurvo carnoso, coriaceo, brevi apiculato primum alutaceo, dein candido, marginibus lateralibus recte inflexis antice subtusque magis apertis; columna oblique torta candida acuminata.

Caracas. Wagener. Matthieu.

Rchb. fil. Bonpl. II 19. Caracas. 4000'. November. Wagener. Blüthen gelb, oder grünhüllig mit weisser Lippe, oder strohgelb mit rothen Puncten, oder grünlich, oder rothbraun: ich finde keine Unterscheidungsmomente für diese Dinge, von denen ich eine Anzahl wilde und zahllose cultivirte Inflorescenzen vorhatte.

Rchb. fil. in Bonpl. II. 381. Merida; San Cristobal. 4000'. Nr. 1193. Schlim.

4. MORMODES IGNEUM Lindl. Paxt. Fl. G. III. 93:

Racemo elongato multifloro, sepalis reflexis petalisque ascendentibus lanceolatis acutissimis planis, labello unguiculato carnoso apiculato lateribus revolutis ambitu transverse elliptico vix angulato.

From Warscewicz's sales.

A stiff stalk, about a foot high bore a dozen large fleshy flowers, of which the sepals and petals were alike chocolate — coloured, the lip a rich fiery orange brown. There was no streaking or spotting in any part of the surface. The sepals were flat, linearlanceolate, very sharp, and spread flat out, even turning backward after a time; the petals, on the contrary, were erect, somewhat broader. The lip, a tough, fleshy body, when spread out had an elliptical outline with the major axis transverse, and the edge extended into a triangular point on one side; in its natural condition it was rolled back, and folded so as to look as if angular, though not really so.

B. and C. accompanied it. B. had dingy red flowers, marked with lines of dots; and C. had dark lake flowers, speckled irregularly with red., but not dotted; their lips were thinner, smaller and had a decidedly angular outline. The two others kinds, *not now* figured, were the same in habit, but neither had any dots; one had faint stripes along the sepals and petals, which were dirty pink, and the lip was a dull green, the other had a much yellower flower; in both sepals and petals were as in B. and C., *but* the lip was much larger, thinner, still more anglar. Distinct species? new? varieties of some species already known? There grows in the temperated parts of the snowcapped mountain ridge of Santa Martha, especially on the branches of an Erythrina a Mormodes of which travellers speak as being most remarkable for the infinite var. of its colours. A striped state of it having flowered at Syon, Sir W. Hooker published it as M. Cartoni. Of that plant we entertain no doubt B—C are varieties. The main fig., so resplendent in colour and striking in dimensions, seems to differ in its broader and more fleshy sepals and petals and in its thicker more leathery *lip*, which has little of the angularity, which belongs to M. Cartoni; we therefore distinguish it under the name of M. igneum, as for the other var. above alluded to, and not figured, they probably belong to M. flavidum of Klotzsch. It is not improbable, that all these things are one and the same species and, if so, the M. lentiginosum of B. M. 4455 will have to be added; for beyond colour the plant seems to have nothing to distinguish it except the total absence of all angularity in the lip. The same principles, which justify the separation of that plant equally authorize the distinction of Cartoni, igneum, flavidum, and also the separation of a small species with rather more membranous pallid flowers etc. Cf. M. convolutum.

Lem. Jardl. Fl. IV. 330. („an potius M. Hookeri Ch. Lem. var. mera?").

5. **MORMODES SPECIOSUM** Linden Paxt. Fl. G. III. 174. Nr. 655:

Sepalis petalisque lanceolatis, labelli tripartiti glabri laciniis lateraliqus ovatis obtusis, intermedia acuminata multo brevioribus.

N. Granada. Ocanna. 4800′. Aug. 52. Schlim.

Flowers 3′′ diam., deep golden yellow, speckled all over even to the lip with rich cinnamon red. Points of lip are deep purple.

6. **MORMODES CARTONI** Hook. B. M. 4214. Cf. Walp. Ann. III. 783. — Lindl. Orch. Lind, pag. 23:

„Flowers extremely variable. Found on Erythrinas, in the temperate regions of Sierra Nevada, of St. Martha. Sepals are flesh coloured; lip fleshy rose." The same plant was found by Mr. Funck at Minca near St. Martha, in the prov. of Rio Hacha at the height of 4000′. (N. —).

7. **MORMODES HOOKERI** Ch. Lem. Jard. Fl. Misc. I. 116. 15. Maj. 1851.) (Huc: *Mormodes atropurpurea* Hook. B. M. 4577:

Pseudobulbis oblongis squamis amplis imbricatis pallidis fuscomarginatis vaginatis, foliis — —, floribus pendulis unicoloribus, sepalis petalisque arcte reflexis ovatolanceolatis marginibus revolutis, labelli late obcordati velutini in stipitem basi attenuati lateribus revolutis, columna oblique torta breviter acuminata.

Panama. Warscewicz. — *M. barbatum* Lindl. Paxt. Fl. G. II. p. 56. gleaning 320. Jan. 1851.

8. MORMODES COLOSSUS Rchb. fil. in v. Schl. B. Z. 1852. p. 636:

Pedunculo pedali, rarifloro, floribus maximis, perigonii phyllis oblongo-lanceolatis, acuminatis (acuminibus apice flexis), labello brevissime unguiculato, dein rhombeo, angulis lateralibus obtusatis, angulo antico longe producto, acuminato; gynostemio abbreviato cuspidato.

Diese ist den übrigen Mormodes-Arten gegenüber ein Riese: sind doch die Blüthen so gross, als die eines sehr üppigen *Cycnoches chlorochilon* Klotzsch. Die Blüthenhülle ist rothbräunlich, der Blüthenstiel schwarzroth. Der Stamm spindelförmig, sehr dick, bis 8'' hoch. Blätter sah ich nicht. Die Säule ist schief nach links geneigt, die Lippenränder sind herabgeschlagen und dabei steht die vordere Lippenplatte lóthrecht. — Es ist überflüssig, die Art mit den anderen zu vergleichen; keine hat eine derartige Lippe. Mittelamerica. Warscewicz.

Huc descriptio falsissima ob labellum planum:

Mormodes macranthum Lindl. Paxt. Fl. G. III. sub 93:

Racemo laxo multifloro, sepalis petalisque anguste lanceolatis acuminatis patentibus, labello unguiculato ovato lanceolato acuminato plano.

Central-Amerika. 7000' ab. level of sea. 18'' circumf.

9. MORMODES CONVOLUTUM Lindl. Paxt. Fl. G. III. sub 93:

Sepalis petalisque linearibus, reflexis, labello tereti convoluto unguiculato, apiculato, incurvo laevi, ambitu hastato angulis abbreviatis et igitur truellaeformi.

S. Martha.

Flowers the smallest yet known in the genus, dull yellow, spotless. A small species with rather more membranous pallid flowers, also from S. Martha, and now in our gardens, the lip of which in rolled up into a slender pipe, but which when flattened has much the form of a sharp trowel.

10. MORMODES WENDLANDI Rchb. fil. Mss.:

Sepalis tepalisque lanceolatis acuminatis, labelli ungue laminae triangulae acuminatae subaequali utrinque dente parvo antrorso juxta angulum lateralem praeditae.

Pedunculus ultra pedalis racemosus. Bracteae ovatae ovariis pedicellatis quater-quinquies breviores. Pedicelli brunneo multipunctati. Ovaria viridia. Sepala ac tepala sublatiora lanceolata, acuminata, flaveola, lineis cinnamomeis nunc interruptis notata. Labellum a basi unguiculari rhombeo dilatatum, transversum, utrinque dente obtusangulo auctum, antice in cuspidem extensum, foveola impressa pone centrum; luteum, lineis punctorum atropurpureorum notatum. Gynostemium vertice cuspidatum; androclinium cucullatum, rostellum crassum retusum; fovea oblonga, fundo oblonga, fundo longitudinaliter sulcata. Ex America centrali misit amiciss. Wendland fil.

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11. MORMODES ATROPURPUREUM Lindl. Bot. Reg. XXII. 1836. tab. 1861:

Racemo oblongo denso, sepalis linearioblongis aequalibus reflexis basibus lateralium paulo obliquis, petalis ovatis erectis supra columnam conniventibus, labello replicato retrorsum arcuato cuneato trilobo; lobis lateralibus deflexis venosis intermedio carnosiore cuspidato subtrilobo.

Spanish Main. Flowers deep purple, on a close erect raceme.

12. MORMODES OCANNAE Lind. et Rchb. fil. Mss.:

Rhachi fractiflexa multiflora, bracteis oblongoligulatis obtusiusculis ovariis pedicellatis quater brevioribus, sepalis tepalisque cuneato ob-

longis acuminatis, labello bene unguiculato, dimidio antico dilatato in laminam trifidam, laciniis lateralibus semioblongis bene obtusatis, lacinia media triangula acuminata.

Ocanna. „Pétales jaunes tachetés de rouge." 4—5000'. Junio. 992. Schlim!

13. MORMODES PARDINA Bat. Orch. Mex. Guat. t. 14. Lind. Bot. Reg. XXIV. Misc. 176. et Bot. Reg. XXIX. (1843). Not. sub 33:

Foliis elongatolanceolatis, racemo elongato multifloro, sepalis petalisque lanceolatis acuminatis subsecundis, labello plano conformi acuto tridentato unguiculato.

Hook. Bot. Mag. 3900: pseudobulbis turbinatis, pp. B. Reg. XXIV. l. superne citato: „Discovered by Karwinski in Oaxaca; flowered at Knypersley Jul. 1837. Its flowers are of a primrose colour spotted with reddish purple in every part and they exhale a most delightful perfume. Its habit is very robust, being at least three times as large as that of the old *M. atropurpureum*. — Bot. Reg. XXV. 1839. Misc. 7.: *Cyclosia maculata* Klotzsch Allg. Berl. Gtz. 1838. n. 39. p. 305. 306. a supposed new Mexican Orchid plant appears to be Mormodes pardina.

var. *unicolor* Hook. B. M. 3879: floribus concoloribus.

14. MORMODES LINEATUM Bat. in Bot. Reg. 1841. Misc. N. 107. 1842. XXVIII. t. 43:

Racemo elongato multifloro, sepalis petalisque oblongo-linearibus abrupte acutis margine reflexis, labello lineari incurvo carnoso sparsim piloso versus basin utrinque dente nunc brevi nunc elongato aucto, columnae dorso et margine pubescente. Guatemala.

The flowers are deliciously fragrant; when they afterwards acquire a bright warm yellow tint and the markings upon them increase in intensity till they have become orange red.

Huc: *Mormodes Warscewiczii* Klotzsch Berl. Allg. Gtz. 1854. 64.

Pseudobulbis ovatis parvis foliosis; foliis octo, linearilanceolatis acuminatis papyraceis laxiusculis leviter nervosis; racemis brevibus septemfloris; perianthii foliolis rufescentibus campanulatim apertis acuminatis, subtus pallidioribus, margine revolutis, exterioribus lanceolatis, interioribus ovato lanceolatis, labello angusto trifido, supra laete roseo sparsim longissime piloso, subtus pallido, lobis lateralibus retrorsis brevioribus; gynostemio puberulo candido semitortuoso; anthera rosea longirostrata biloculari, caudicula lata candida; polliniis globosis rufescentibus.

Peru. Warscewicz. col. Gireoud.

15. MORMODES HISTRIO Lind. Rchb. fil. in Otto Hamburger Gtz. 1859. 54.

1421. STANHOPEA *Frost.*

Hook. B. Mag. 2348. 2349.

Plantae bene cognitae. Inde vix necessarium videtur, utramque monographiam prodere, quae apparuit. Prima a cl. Lindley edita, impressa 1. Octobri 1852, seriem hanc effecit: §. 1. *Densiflora*: Mesochilium cornutum. Epichilium integrum. Bracteae ovario subaequales. 1. S. insignis Frost. 2. S. inodora Lodd. 3. S. Bucephalus Lindl. §. 2. *Laxiflora*. Mesochilium cornutum. Epichilium integrum. Bracteae ovario multo breviores. 4. S. oculata Lindl. 5. S. guttulata Lindl. 6. S. Wardii Lodd. 7. S. Ruckeri Lind. 8. S. graveolens Lindl. 9. S. quadricornis Lindl. 10. S. Warscewicziana Klotzsch. §. 3. *Tridentata*. Mesochilium cornutum. Epichilium tridentatum. 11. S. tigrina Bat. 12. S. Martiana Bat. 13. S. Devoniensis Lindl. 14. S. velata Morr. 15. S. saccata Bat. 16. S. tricornis Lindl. §. 4. *Ecornuta*. Mesochilium muticum. 17. S. cirrhata Lindl. 18. S. grandiflora Lindl. 19. S. eburnea Lindl.

20. S. ecornuta Lindl. Alteram ego edidi post Lindleyanam monographiam, quam hic reddere juvat. Cf. Xenia Orchidacea I. p. 116:

Sepala ac tepala minora carnoso membranacea libera (tepala raro gynostemio adnata cf. Stanhopeam ecornutam Lemaire) anthesi vulgo reflexa. Labellum totum eboraceum ante basin non abruptum, ibi nunquam planum, limbis semper erectis, integrum (Stanhopeastrum), seu trilobum lobis lateralibus erectis callo transverso coalitis, lobo medio antico trilobo, disco minuto sessili seu unguiculato (Stanhopea Haselowiana Rchb. fil.), lobis lateralibus corniformibus, lobo medio laminam trullaeformem sistente; lobus medius cum lobis lateralibus coalitis vulgo articulatus; lobulus anticus cum disco lobulorum lateralium etiam vulgo articulatus. Gynostemium liberum seu cum labelli basi connatum (Stanhopea connata Klotzsch; ecornuta Lemaire); rectum seu arcuatum, alatum seu apterum. Androclinium planum, rectum, seu proclive, alula utrinque cinctum seu nudum; rostellum tridentatum; fovea minuta transversa supposita. Pollinia linearia fissa, rarissime sessilia, vulgo in caudicula elongata subterminalia; glandula triangula retrorsum sagittata, rhombea (Stanhopea connata) transverse bicruris (Stanhopea ecornuta). Vandeae Americanae tropicae.

A. Stanhopeastrum.

Labellum unimembratum simpliciter calceolare. (Est labellum integrum.)

1. STANHOPEA CALCEOLUS Rchb. fil. l. c.:

Labello pandurato calceolato acuminato (supra lineam mediam inferioris paginae lineato?), tepalis ligulatis acutis reflexis, gynostemio crasso aptero.

Sepala flava. Tepala et labellum aurea. Gynostemium albidum. Pedunculus biflorus. Am Centr. De Warscewicz.

2. STANHOPEA ECORNUTA Lemaire Flore des Serres II. 181:

Labello calceiformi obtusissimo margine gibberoso, medio sella turcica ornato, tepalis obtuse rhombeis, gynostemio depresso prope aptero.

Rchb. fil. Xenia tab. 43. p. 124:

Stanhopea ecornuta Ch. Lemaire in Flore des Serres. 1846. 181. Lindl. Fl. Garden. Xyl. 20. (iterata praecedens). Rchb. fil. in v. Mohl u. v. Schl. Bot. Ztg. X. 1852. 836.

Anguloa Coryanthes Klotzsch in Herb. Berol. et Hort. Decker.

Stanhopeastrum ecornutum Rchb. fil. in v. Mohl und v. Schlechtendal Bot. Zeitung. X. 1852. 927.

Pseudobulbus conico turbinatus. Folium Stanhopearum. Pedunculus abbreviatus crassus vaginis paucis triangulis distichis punctulatis scariosulis vestitus biflorus. Bracteae ovaria cylindracea superantes. Sepala oblonga membranacea carnosula apice attenuato suberoso carnosa. Tepala minora obtuse rhombea cum gynostemio altius connata. Labellum calceolare eboraceum postice inferne ventricosum; limbus incrassatus apice obtuse acutus, supra apicem trigibbus, gibberibus lateralibus bilobis; sella turcica in disco antice utrinque in paginam labelli transcedens. Gynostemium transverse semiteres crassum utroque latere crasso alato marginatum; rostellum trilobum pendulum; anthera oblonga depressa antice lato alata, marginata; pollinia cuneato ligulata ab externo margine fissa; caudicula lineari rhombea brevis; glandula triangula seu linearis transversa bicruris. Stigma sub rostello absconditum. — Perigonium albido ochroleucum flaveolo irroratum striatumque. Labellum lapidis politi instar nitidissimum, antice candidum, postice aurantiacum punctulis purpureis. Gynostemium pallide stramineum basi antice purpureo guttulatum.

B. Stanhopeae eburneae.

Labellum bimembratum; mesochilium evanidum; hypochilium et epichilium evoluta. (Est labellum integrum.)

3. STANHOPEA EBURNEA Lindl. Bot. Reg. 1529:

Labello calceiformi ligulato pandurato acuto, ante basin utrinque antrorsum unidentato, carina marginante a basi ultra medium, carinula supposita in basi, fovea hypochilii semiovata intus puberula, mesochilio solido postice retuso, antice erosulo, seu integro angulis prosilientibus utrinque marginato, epichilio triangulo; gynostemio utrinque dimidio anteriori semiovato alato, alulis subnullis.

Ceratochilus grandiflorus Lodd. Bot. Cab. 1414. *Stanhopea grandiflora* L. O. 158. — Bot. Mag. 3359. *Stanhopea calceolata* Hort. Pedunculus bi- — triflorus. Bracteae ovatae acutae ovariis triplo breviores. Sepala oblonga. Tepala linearia. Perigonium ochroleuco-album. Labellum candidum purpureopictum. Crescit in Brasilia. (Hortul.). Surinamo: Wullschlägel! Venezuela: Wagener (fecit iconem et misit plantas vivas)

Obs. Ill. Lindley sejungit St. eburneam et St. grandifloram ex situ dentium hypochilii, longitudine epichilii, apertura hypochilii, limbo antico epichilii. Reperimus sat multos status medios; numquam si quidem vidimus plantam, cujus epichilium mesochilio aequale, tamen vulgo dentes ex medio limbo hypochilii prosiliebant.

4. STANHOPEA CIRRHATA Lindl. Journ. Hort. Soc. V. 37:

Hypochilio semiovato antrorsum utrinque angulis carnosis prosilientibus instructo, (mesochilio nullo), epichilio ovato acuto supra basin foveato, tepalis ligulatis acutis reflexis, gynostemio semitereti crasso apice utrinque alula lineari erecta praedito.

Lindley Flower Garden I. 31. xyl. 19. Pedunculus uniflorus vaginis distichis acutis vestitus. Bractea ovario longior. „Sepala alba. Tepala et labellum aurea. Anguli labelli atroviolacei.“ Nicaragua. Warscewicz.

C. Stanhopeae genuinae.

Labellum trimembratum: hypochilium, mesochilium, epichilium evoluta. Mesochilium bicorne. (Est labellum trifidum.)

AA. Labellum exarticulalum.

5. STANHOPEA TRICORNIS Lindl. Journ. Hort. Soc. IV. 263:

Hypochilio depresso oblongo basi utrinque angulato cum mesochilio bicorni esulcato continuo, cornubus rectis abbreviatis, epichilio lineari oblongo concavo truncato, apice lobato, margine membranaceo, dorso valde gibboso, superne dente brevi recto aucto; tepalis carnosis rhombeis; gynostemii alis semiovatis in dimidio superiori; alulis obtusangulis.

Lindl. Fl. Garden. I. p. 31. xyl. 24. — Ex nob. de Warscz.: tepala rosea, reliquus flos albus. Pedunculus biflorus vaginis valde abbreviatis ochreatis vestitus. Bracteae oblongae apiculatae ovariis dimidio breviores. Flores illis Stanhopeae oculatae majores. — Peruvia occid. de Warscewicz.

BB. Labellum uniarticulatum sc. in junctione hypochilii cum mesochilio. Mesochilium cum epichilio exarticulatum.

6. STANHOPEA CONNATA Klotzsch in Otto et Dietrich Allg. Gartenz. 1854. 226:

Labello subconfluenti, hypochilio exacte semigloboso utrinque bicarinato, carinis basin versus convergentibus canali angusto (?), cornubus late falcatis, epichilio late rhombeo curvato haud ita manifeste articulato,

tepalis ligulatis bene acutis, gynostemio crasso depresso basi utrinque velutino aptero alulis falcatis inflexis.

Ad vivam haec scripsimus: aff. St. Devoniensi cornubus falcatis infra introrsum implicatis, epichilio ovato acuto, hypochilio basi gynostemii dilatati apteri apice bifalcis adnato. — Pedunculus uniflorus. Bractea ovarii quadripollicaris dimidiam aequans. Sepala ac tepala reflexa. Sepala oblonga acutiuscula vitellina. Tepala ligulata acuta vitellino aurantiaca, basi purpureo aurantiaca. Hypochilium Stanhopeae Devoniensis Lindl. saccatum (nec didymum), humile, latum, transversum, hinc sulculis quasi aratum, atropurpureo aurantiacum, maculis obscurioribus signatum; carina transversa obliqua antica cum margine summo confluens, triangulum nitidum describens; margines superiores per tres lineas cum gynostemio connati. Epichilium et mesochilium aurantiaca. Mesochilium cum epichilio (altiori, quam hypochilium) non bene articulatum. Gynostemium crassum, rectum, transsectione prope depresso tetragonum, utraque basi velutinum, infra foveam minutissimam longitudinaliter striatum. Anguli membranacei trianguli inflexi utrinque pone androclinium. Discus elevatus medio longitudinaliter costatus sub fovea. Pollinia oblongo ligulata extus sulcata sessilia in glandula rhombea. — Et haec habuit cl. Klotzsch l. c. „Pseudobulbis globoso ovatis, leviter striatis, monophyllis, foliis ovalibus brevissime recurvato acutis petiolo semisulcato longioribus; bracteis ovariis brevioribus; perigonii foliolis exterioribus flavidis, apice margineque recurvis purpureo punctatis minoribus; labello vitellino, hypochilio brevissimo saccato, dorso striis punctulisque purpureis obsito, infra scrotum glanduloso fusco plicato, antice fusco rubro oculato, marginibus cum gynostemii pede connatis, epichilio latissimo recurvo acuto, cornubus late falcatis acuminatis epichilio aequilongis; columna candida crassa exunguiculata dentibus duobus magnis terminata." „Von Stanhopea graveolens unterscheidet sie sich dadurch, dass das untere Glied der Kronenlippe oder das Hypochilium mit der verdickten Basis der Stempelsäule verwachsen ist." *Stanhopea graveolens* Klotzsch (nec Lindl.!) forsan est *Stanhopea Devoniensis* Lindl.? — Ex Peruvia boreali misisse dicitur cl. de Warscewicz. Floruit in horto Mathieu Berolinensi. — Cf. Rchb. fil. in Otto Hamb. Gtz. 1860. pag. 422.

CC. Labellum biarticulatum sc. in junctione hypochilii ac mesochilii, et mesochilii et epichilii.

AAA. Hypochilium semiglobosum.

I. Epichilium integrum acutum.

7. **STANHOPEA INSIGNIS** Frost in Hook. Bot. Mag. 2948. 2949:

Hypochilio sessili semigloboso, a basi medium versus superne oblique bicarinato, angulis capitis obtusis; canali subamplo; pectore arguto; cornubus teretiusculis; epichilio ovato acuto; tepalis lineari ligulatis; gynostemii alis semioblongis dimidium usque, ante alulas constrictis; alulis obtusatis. Lodd. Bot. Cab. 1985. Lindl. Bot. Reg. 1837.

Racemus densus. Bracteae ovario aequales. Sepala ovata acuta. Perigonium flavum seu armeniacum, maculis circularibus atropurpureis multis. Gynostemium ac labellum albida, punctulis atrokermesinis. Labelli basis et gynostemii dorsum viride. — Ex Brasilia allatam dicunt. Audivimus Berolini a de Warscewicz e Peruvia missam floruisse.

Obs. Huc forsan referenda: *Stanhopea maculosa* Knw. Westc. Floral Cab. III. 110. Nr. 74.

8. STANHOPEA WARSCEWICZIANA Klotzsch! in Otto und Dietrich Allg. Gartenztg. 1852. 274:

Hypochilio sessili semigloboso, utrinque ante apicem limbi uniangulato, dente subito in carinam perpendicularem brevem descendente, pectore obtusato, canali brevi angusto, cornubus teretiusculis, epichilio

ovato acuminato, tepalis linearibus acuminatis, gynostemii alis semiligulatis in alulas acutas antrorsas continuo transeuntibus.

Haec penes florem siccum madefactum, quae ad vivam iterum erunt revidenda. Addimus longam cl. auctoris diagnosin minime diagnosticam. „Pseudobulbis ovatis, apice attenuatis, longitudinaliter sulcatis, squamis membranaceis ovato lanceolatis acuminatis alutaceis minutissime nigro punctulatis obductis, apice monophyllis; foliis ovalibus utrinque attenuatis membranaceo coriaceis rigidis plicatis quinque- — septemnerviis longe petiolatis; bracteis pallidis germine acuminato subduplo brevioribus; perigonii foliolis sordide albidis, exterioribus majoribus patentibus, margine revolutis, apice reflexis; interioribus acuminatissimis undulatis reflexis, hypochilio sessili globoso lutescenti candido, extus glaberrimo et unidentato usque ad dentem profunde sulcato, epichilio late ovato acuto antice minutissime rubro punctulato incrassato, dorso concavo albido cornubus acutissimis incurvis, dente brevi inter cornua antice instructo; columna late alata basi unguiculata." Chiriqui de Warscewicz. Floruit apud hortul. Mathieu Berolini Julio exeunte 1852.

β. Epichilium retuso tridentatum.

9. STANHOPEA MARTIANA Lindl. Bot. Reg. 1840. Misc. 109:

Hypochilio brevi conicosemigloboso, nunc didymo, utroque margine bicarinato, pectore argutiusculo, canali amplo, cornubus ancipitibus, epichilio ligulato apice retuso subaequaliter tridentato, sepalis oblongo ligulatis; gynostemio prope aptero et exalulato, velutino.

Bateman Orch. Mex. Guat. t. 27. Lindl. Bot. Reg. 1843. XXIX. t. 44. (var. bicolor.) *Stanhopea velata* Morren Ann. Gan. t. 153. p. 333. *Stanhopea implicata* Westcott. Hort. fid. Lindl. Folia.

Perigonium albidum seu flaveolo album, purpureo maculatum. Spica vulgo biflora. Bracteae ovariis aequales. Epichilium ac cornua prope eadem, quae in *Stanhopea tricorni* Lindl. Mexico „Karwinski, Galeotti" fide ill. Lindl.

γ. Epichilium acute ac manifeste tridentatum.

αα. Gynostemium prope apterum.

10. STANHOPEA DEVONIENSIS Lindl. Sert. Orch. t. 1. (epichilio integro):

Hypochilio globoso antrorso pectore obtusato, utrinque unicarinato, canali angusto, cornubus teretiusculis, epichilio obtusangulo rhombeo apice tridentato, tepalis oblongo ligulatis, gynostemio gracili exalulato.

Lindl. Bot. Reg. XXX. 1843. N. 44. Van Houtte Flore des Serres 974. Perigonium flaveolum atropurpureo pantherinum, valde odorum. Dimidium inferius hypochilii vulgo atropurpureum. Spicae biflorae. Bracteae ovariis paulo breviores. Mexico?

11. STANHOPEA SACCATA Bateman Orch. Mex. Guat. t. 15:

Recedit hypochilii sacco aequali nec antrorso, pectore non signato, canali subnullo, cornubus ancipiti compressis.

Flores flavidi brunneo punctulati. Spica tri- — quadriflora. Bracteae vulgo ovariis breviores. — Guatemala fid. domin. Skinner.

ββ. Gynostemium manifeste alatum.

12. STANHOPEA MARSHII Rchb. fil. l. c. 120:

aff. St. Devoniensi hypochilio graciliori, pectore saccato antrorso, carinis geminis utrinque, canali ...., cornubus teretiusculis, epichilii obtrianguli dentibus ternis aequalibus, tepalis oblongis, gynostemii alis semiovatis in dimidio anteriore, alulis obtusatis.

Perigonium album dictum, nisi egregie fallimur. Pedunculus plurivaginatus, biflorus (unus tantum servatus flos). Bractea ovario brevi aequalis. Flos magnitudine illius Stanhopeae insignis.

13. STANHOPEA TIGRINA Bateman Orch. Mex. Guat. t. 7:

Hypochilio bene semigloboso utrinque carinato, canali bene aperto, cornubus subcompressis, epichilio ovato apice subaequaliter tridentato, tepalis ligulatis acutis, gynostemio late semioblongo alato, apice (prope exalulato) ac basi exceptis.

Bot. Reg. XXV. 1839. 12. Bot. Mag. 4197. Van Houtte Flore des Serres VII. 713—715. „*St. tigrina superba.*" Morren Ann. Gand. 21. (var. atroviolacea perigonio apicibus tantum ac limbo flaveolis). Coatzonte Coxoahitl seu Lyncea. Hernandez Thesaurus rer. Med. Nov. Hisp. 266. *Anguloa Hernandesii* Kunth Synopsis I. 322. *Maxillaria lyncea* L. O. 151. *Stanhopea expansa* Hort. *Stanhopea tigrina lutescens* Gardn. Chron. 1851. 611. (Flowers brilliant yellow, inclining to orange, larger and handsomer than those of any other kind.) — Pedunculus biflorus. Bracteae ovariis subbreviores. Flores longe maximi; flavidi atroviolaceo tigrati seu prope toti atroviolacei. Hypochilii nucha valde papulosa. Odor gravissimus. — Mexico Ruiz et Pavon! Xalapa ibidem Henchman fid. ill. Lindley.

BBB. Hypochilium cymbiforme.

I. Epichilium simpliciter acutum.

14. STANHOPEA OCULATA L. O. 158:

Hypochilio utrinque bicarinato capite semilunato, pectore arguto, canali angusto, cornubus semiteretibus, epichilio ovato acuto, tepalis ligulatis acutis, gynostemii alis semioblongis ante alulas acutas constrictis, dimidio inferiori gynostemii aptero.

Lindl. Bot. Reg. 1800. *Ceratochilus oculatus* Loddig. Bot. Cab. 1764. *Stanhopea Lindleyi Zuccarini* et *Stanhopea oculata Barkeriana* Hort. (Cf. Bot. Reg. 1843. sub 44: „Many supposed varieties occur in gardens, varying in colour and in the spotting of the lip. There is one, called Barkeriana, which is more remarkable, than the others. It looks like Stanhopea insignis with the lip of Stanhopea oculata, and is very handsome. The sepals, petals and column are covered with numerous purple freckles rather than spots, which, as the flower fades, run together as if their colouring matter was dissolved, so that at last the flower becomes of a dull wine-red tint. This is apparently Stanhopea Lindleyi of Zuccarini.") Flores vulgo albi seu albido citrini annulis multis atropurpureis intus supra perigonium. Tepala basi utrinque bioculata. Labellum albidum. Hypochilium utrinque atropurpureo oculatum. — Racemus laxus. Bracteae ovariis vulgo duplo breviores. Mexico Ruiz et Pavon! Karwinski! Schiede!

Obs. Stanhopea oculata Meleagris Gard. Chronicle 1851. 471: quid?

b. GUTTULATA. Huc: *Stanhopea guttulata* Lindl. Bot. Reg. 1843. XXIX. Misc. 116: Recedit mesochilii canali amplo, gynostemii alis semiovatis latis apicilaribus basi subito abruptis, apice in alulas continuas acutas transeuntibus. Gard. Chron. 1848. 439. c. xyl. —? Lemaire Jardin Fleur. III. 309. 310. Pro genuina nimis magna. — Flores illis Stanhopeae oculatae tertia minores. Perigonium flaveolum seu cupratum. Latera antica hypochilii non semilunata, sed oblique descendentia basin spectantia. Patria?

II. Epichilium juxta apicem utrinque sinuatum.

15. STANHOPEA GRANDIFLORA Rchb. fil. Mss. Huc: *Stanhopea Bucephalus* L. O. 157: Recedit epichilio ovato cuspidato, utrinque sinuato. Inflorescentia densa. Bracteae ovaria subaequantes. Bot. Reg. 1845. 24. *Epidendrum grandiflorum* Hb. Bonpl. Aeq. p. 94. t. 27. *Anguloa grandiflora* H. B. Kth. Nov. Gen. Sp. I. 345. Perigonium pallide flavum seu armeniacum guttulis (nec annulis) atropurpureis. Hypochilium intense flavum. Peruvia: Cuenca Humboldt et Bonpland. Sylvae prope Paccha in ascensu a Guayaquil versus Loxa 6000. Hartweg.

b. JENISCHIANA: *St. Jenischiana Kramer* in v. Mohl und v. Schlechtendal Bot. Zeit 1852. 934:

Recedit epichilio simpliciter ac obtuse acuto, pectore obtuso (qua nota etiam differt Stanhopea oculata Lindl.). Racemus laxus. Bracteae ovariis duplo breviores.

Haec 1852 scripsimus: „Spicis laxis, bracteis oblongis acutis, navicularibus, ovariis longe rostratis duplo brevioribus; hypochilio anguste unguiculato curvo cymbiformi antice abrupte intruso, basi ecorni, extus utrinque bicarinato, intus laevi, pariete anteriori autem minuté muriculato, mesochilio aperte et profunde sulcato, sulco postice in lobulum excurrente, utroque lobo antice breviter unicorni, epichilio unguiculato, trilobo, lobis lateralibus subteretibus, acutis, curvulis (cornubus!), lobo medio brevissime unguiculato, abrupte transversali, apice obtuse apiculato, tumore conico sulcato in basi; gynostemio gracili, subcurvato, a regione infraapicilari medium usque abrupte semioblonge alato; androclinii alis lateralibus obtuse triangulis, erectis; rostello trilobo, lobis lateralibus falcatis, lobo medio subulato acuto. — Eine höchst seltene einfache Färbung zeichnet diese edle Pflanze aus. Ein schönes, gesättigtes Gelb mit zartem Hauch in mattes Weinroth bildet die Grundfarbe der Hüllblätter, welche mit einzelnen cochenillefarbigen Flecken geschmückt sind. Die Säule ist hellgrün mit rothen Puncten. Das Hypochilium orangefarbig, mit cochenillerothen Flecken. Die Pflanze steht nächst Stanhopea oculata, für deren schön gefärbte Abart ich sie früher hielt. Ich hatte aber im Sommer nur welkende Blüthen erhalten. Ganz frisch sendete sie kürzlich Herr Kramer. Ich glaube, dass vorzüglich das Rostellum und die Säulenöhrchen die Pflanze auszeichnen. Die Säulenflügel nähern sich denen der Stanhopea guttulata. Herr Kramer widmete die Art Herrn Senator Jenisch, welcher dieselbe 1840 aus Panama einführte. Sie hat die Tugend, das ganze Jahr zu blühen und ist wohl unstreitig eine der schönsten Stanhopeae."

CCC. Hypochilium oblongum prope rectum seu cum basi descendenti angulatum.

I. Hypochilium basi ecorne.

α. Mesochilium subsessile.

αα. Epichilium simpliciter acutum.

ααα. Gynostemium basi velutinum.

16. STANHOPEA INODORA Lodd. Cat. 1147. Lindl. Bot. Reg. 1845. 65:

Hypochilio ante basin utrinque minute angulato, angulis anticis obtusatis, infra utrumque limbum unicarinato, pectore arguto antrorso, canali profundo, cornubus tereti subulatis gracilibus, epichilio transverse ovato acuto, tepalis ligulatis acutis, gynostemii alis semiovatis latis sensim evanescentibus tertiam infimam versus, alulis acutis.

*Spica pluriflora. Bracteae ovariis abbreviatis subaequales. Perigonia albida, hypochilii basi aurantiaca, gynostemii basi viridi. Ex Mexico allata dicitur.

βββ. Gynostemium glabrum.

17. STANHOPEA WARDII Lodd. in Lindl. Sert. Orch. t. 20:

Hypochilio a basi descendenti angulato seu prope recto, utrinque bicarinato supra marginem utrinque angulato, pectore argutissimo, mesochilii canali angusto, carinis antice utrinque quaternis, cornubus compressis falcatis, epichilio ovatorhombeo acuto, tepalis ligulatis acutis, gynostemii alis latissimis tertiam infimam usque, statim in alulas transeuntibus.

Knw. et Westc. Floral Cab. II. 90. Rchb. fil. Orchid. Europ. Tab. 3. 13. *Stanhopea aurea* G. Lodd. in Bot. Reg. 1841. Misc. 31. (Varietas omnino aurea, quam cl. Lindl. ita describit: „imagine a plant, whose flowers have the size of Stanhopea insignis, the form of Stanhopea venusta, the smell of Stanhopea oculata, the colour of Maxillaria aromatica, and are arranged in a spike two feet long, and the reader will have a tolerably distinct conception of this beautiful thing, which Mesrs. Loddiges received from Mr. Bateman, who received it from Guatemala. It has the two dark spots of Stanhopea oculata, but they are in some manner lost in the flood of yellow that surrounds them.") Endl. Parad. Vind. Fasc. 5. Spica oblongata multiflora. Bracteae ovariis duplo breviores; seu aequales: *Stanhopea amoena* Klotzsch! — ob bracteas longiores et folia (!) distincta! Vidimus specimina authentica et habuimus inflorescentiam authenticam vivam a dom. Mathieu. Ab ill. Lindley, qui descriptionem tantum noverat ad St. inodoram sub B. amoena (Folia 1. Stanhopea pag. 2. N. 2.) posita. Quid tamen cum Stanhopea Bucephalo quacum comparavit cl. Klotzsch commune habeat, nisi bractearum longitudinem, non intelligimus. *Stanhopea graveolens* Lemaire in Fl. des Serres VIII. 1846. 11. huc pertinet ob gynostemii alas super tertiam infimam abruptis. Flores vulgo vitellini imo sulphureo ochroleuci tepalis purpureo punctulatis, nunc etiam sepalis; labello praesertim basi vitellino, apice pallidiore fundo foveae hypochiliaris intus atropurpureo fasciato, oculo utrinque extus inter carinas; punctulis crebris. Gynostemium alboviride atropurpureo punctulatum. — Ruiz et Pavon legerunt! Crescit in America centrali: Chiriqui de Warscewicz! Nova Granada de Warscewicz! Caracas (Appun! et Wagener! vivam miserunt).

18. STANHOPEA GRAVEOLENS Lindl. Bot. Reg. 1840. Misc. 125:

Recedit a praecedenti canali aperto latiusculo, gynostemii alis basin gynostemii prope attingentibus.

? Ann. d. hort. de Gand. t. 54. (nuper non vidimus). — Sepala et petala straminea. Labelli basis armeniaca. Odor gravissimus. An varietas praecedentis?! Cf. ill. Lindl. Bot. Reg. XXVI. 1840. Misc. sub 147. sub St. Wardii (var. Barkeri): „of this the fragrance is very agreeable, which is more than can be said of Stanhopea Wardii itself and some of the other varieties of which I now fear even Stanhopea graveolens N. 125. is one, so many forms have I examined within the last weeks." — E. Guatemala?

19. STANHOPEA BUCKERI Lindl. Bot. Reg. 1843. sub 44:

Recedit a praecedenti utraque hypochilio obovato, sc. basin versus attenuato.

Canalis angustus. Vulgo quam *Stanhopea Wardii* Lodd. paulo pallidior. — Var! grammica Rchb. fil. in Otto und Dietrich Allg. Gartenztg. 1855. 243. est varietas coloris armeniaci. Hypochilii antrum purpureum lituris atris pictum; mesochilium et hypochilium rosea. Paulo accedit ad Stanhopeam Wardii. Pedunculus tredecim flores tenuit. C. Wrede Oschersleben. — Mexico fid. Loddiges.

20. STANHOPEA COSTARICENSIS Rchb. fil. in Otto Hamb. Gtz. 1860. 421:

ββ. Epichilium antice retuso semilunato excisum hinc utrinque unidentatum, denticulo in medio.

21. STANHOPEA FREGEANA Rchb. fil. in Otto und Dietrich Allgem. Gartenzeitung. 1855. 313:

Hypochilio a basi descendenti dein quadratulo superficie inferiori intruso utrinque sesquicarinato, mesochilii canali amplo, pectore antrorsum gibberoso obtuso, cornubus falcatis subcompressis, tepalis ligulatis acutiusculis, gynostemii alis medianis semiovatis, alulis obtusatis.

Pseudobulbi et folia prope Stanhopeae tigrinae Bateman. Pedunculi dense vaginati biflori. Bracteae longitudine variae nunc ovaria subaequantes. Perigonium media anthesi patulum, numquam refractum, ante et post anthesin mediam deflexum, semiclausum. Sepala oblongo triangula. Tepala oblongo ligulata acuta breviora, vulgo semitorta. Omnia intus vitellina, demum aquose cuprata; guttis multis intense atrokermesinis; extus pallida, aquosa. Hypochilium ab ungue subquadratum, antrorsum dilatatum, fundus anticus (nucha papulosa) antrorsum protensus sub mesochilio; sinu profundo ab angulo laterali superiori distentus, carina ascendens a margine summo tantum in superficiem superiorem transcedens, canalis anticus hypochilii latus, postice denticulatus, antice in lamellam obtusam extensus; cornua epichilio aequalia; epichilium a basi latiuscula extensum. subquadratum, basi superne gibbere didymo signatum. Gynostemium arcu minuto ascendens, tum cum labello parallelum; anguli apicilares obtusati. Labellum et gynostemium alba, maculis parvis atropurpureis obsita.

Mexico. Ruiz Pavon! Galeotti misit vivam. (Vid. viv. c. et sicc. sp. et c.)

Obs. Nuper hanc cum *Stanhopea tigrina* Bateman comparavimus, cui certe toto habitu, pedunculo bifloro etc. valde affinis. Cum tamen hic hypochilii formam strenue insecuti fuerimus, huc potius referenda visa.

β. Mesochilium bene unguiculatum.

22. STANHOPEA HASELOWIANA Rchb. fil. in Otto und Dietrich Allg. Gtz. 1855. 322:

(Errore typographico „Haselofflana"): hypochilio sessili recto oblongo basi non angustato; utrinque bicarinato, ante basin paulo angulato, pectore proclivi obtusato, canali profundo lato, mesochilio extenso canaliformi, epichilio ovato acuminato lateribus utrinque rectangulo replicato, tepalis oblongoligulatis acutis, gynostemii alis semioblongis dimidium inferius usque, alulis falcatis.

Spica quinqueflora. Bracteae ovariis subduplo breviores. Flores illis Stanhopeae oculatae magnae dimidio majores, longi. Sepala oblongo lanceolata acuta. Tepala lato ligulata acuta margine minute undulato. Labelli antrum antice papulis elongatis vestitum. Perigonium albidum annulis punctisque atropurpureis — demum exceptis sepalis purpureum. Ex Peruvia boreali misit de Warscewicz.

II. Hypochilium utrinque corniculo acuto antrorso auctum.

23. STANHOPEA QUADRICORNIS Lindl. Bot. Reg. XXIX. (XI.) 1838. 5;

Hypochilio basi utrinque antrorsum cornuto (more St. eburneae), utrinque bicarinato, pectore omnino proclivi nullo pacto arguto, canali latiusculo superficiali evanescenti, cornubus teretisubulatis, epichilio ovato acuto, tepalis cuneato ligulatis acuminatis, gynostemio superne semiligulato alato, alulis triangulis.

Flores speciosi vitellini purpureo aspersi. Hypochilium purpureo pictum, basi totum atropurpureum. Bracteae dimidio ovario subaequales. Ex America centrali allata dicitur, quae primum floruit apud dom. Rucker.

1422. GONGORA *Ruiz. Pav.*

(Fl. Peruv. Prodr. 117. Tab. 25.)

Rchb. *Xenia Orchid.* I. p. 51.. Haec:

Perigonium carnosulum. Sepala inaequalia. Sepalum dorsale cum gynostemii basi connatum. Sepala lateralia in ungue gynostemii. Tepala omnino disparia cum gynostemio superius, inferius connata et in illius

margine antico alato decurrentia. Labellum eboraceum unguiculatum; lobi laterales (hypochilium) erecti paralleli, varie cornigeri s. aristuliferi; antice in carinam seu callum seu septum confluentes; lobus medius (epichilium) anceps seu saccatus. Gynostemium semiteres clavatum apice truncatum androclinio vulgo immarginato. Rostellum dentiforme supra foveam linearem humillimam. Anthera depresso mitrata. Pollinia 2 linearia depressa in caudicula lineari. Glandula minuta rotunda seu punctiformis (in Gongora galeata Rchb. fil.).

A. Epichilium erectum abbreviatum sc. altius, quam latum seu aeque altum ac latum. Tepala subbasilaria.

I. Tepala apice divaricato biloba lobo superiori setaceo.

1. GONGORA GALEATA. *Maxillaria galeata* Lindl. in Loddiges Bot. Cab. 1645. *Acropera Loddigesii* Lindl. Gen. et Sp. Orch. 172. *A. flavirostris* v. *Hoffmannsegge*! Verzeichniss der Orchideen etc. 1844. p. 5! *A. flavida* Klotzsch! Allg. Gartenztg. 1851. 217! *A. pallida* Hort! *A. citrina* Hort! *A. fuscata* Hort! Pseudobulbus angulato costatus (more generis). Folia oblonga acuta basi petiolato attenuata plicata. Racemi infrabulbes flaccidi laxi, ovariis pedicellatis arcuatis. Sepalum summum cucullato oblongum acutum, sepala lateralia oblonga acuta subobliqua. Tepala arcuata deflexa, apice exciso biloba, lobus superior triangulus. Labelli unguis planus, hypochilii lobi obtusanguli erecti antice in carinam transversam confluentes, epichilium saccatum tridentatum abbreviatum; dentes laterales obtusati, dens medius uncinatus. Gynostemium clavatum, androclinium marginatum, utrinque alato marginatum basi utrinque obtusangulo marginatum lineola transversa limites inter gynostemii pedem labellique unguem definiente. Quod momentum geneticum habendum esset, nisi in G. truncata cum saccata vere critica occurreret obscure, in truncata plane deficeret. Flores atropurpureo flavi, citrini, ex his coloribus variegati. Xalapa Mexici. Leibold!

Huc: DC. jun. neuv. notice sur les pl. du jard. de Genève t. 2.

Huc: *Acropera flavida* Kl. l. c.:

Pseudobulbis ovatis, apice attenuatis, bifoliatis, foliis oblongis, tri- — quinquecostatis, acuminatis, basi longe attenuatis, utrinque nitidis; racemis basilaribus, pendulis, glabris, pallide flavescentibus, bracteis membranaceis, lanceolatis, acutis instructis; perigonii foliolis pallide flavidis; foliolo supremo galeato apice apiculato recurvo; labello vitellino; germinibus sulcatis, scabridis pedicellisque pallide flavidis.

Lindl. Paxt. Fl. G. III. p. 13. *A. flavida* Kl. The character of this species as given by Dr. Klotzsch is insufficient to distinguish it from A. flavida *).

II. Tepala ante apicem acutum infra seu utrinque acutangula.

2. GONGORA SEIDELIANA Rchb. fil. in v. Mohl u. v. Schlechtendal Bot. Ztg. X. 637. 1852.

Perigonii sepalum summum lanceolatum acutum, sepala lateralia trapezoideo oblonga, acuta. Tepala minuta ligulata acuminata, latere inferiori seu inferiori et superiori angulata; basin versus inserta. Labellum bene unguiculatum; hypochilium compressum, basi omnino ecornutum, latere superiori rectiusculo, plica transversa a basi antica in margine superiori in setam exeunte; epichilium brevissimum, anceps, basi conico productum, apice tridentatum, dente medio acuto producto, dentibus lateralibus nunc obtusiusculis minoribus. Flores vitellini brunneo maculati. Labellum album.

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*) Sic.

III. Tepala simpliciter acuta s. apice setacea.

3. GONGORA TRUNCATA Lindl. Bot. Reg. XXIX. 1843. Misc. 52. XXXI. 1845. 56:

Carinula per unguem in gynostemii basi, hypochilii alti setis anticis, epichilio a latiori basi acuto erecto.

Sepalum summum oblongum cuneatum acutum. Sepala lateralia obovata obliqua acuta. Tepala minutissima triangula decurrentia. Labelli unguis abbreviatus (cf. supra). Hypochilii lobi alti, subquadrati, postice omnino obtusanguli; plica transversa a basi antica versus marginem superiorem in aristam elongatam retrorsam exeunte; septum, quo hypochilii lobi antice confluunt omnino transversum more G. galeatae, nec carinaeforme; epichilium cucullatum triangulum apice paulisper uncinatum. Gynostemium clavatum apice utroque angulo unidentatum. Ex Mexico allatam dicunt.

4. GONGORA SACCATA Rchb. fil. l. c. 55:

Labelli ungue cum gynostemii pede continuo sine ulla plica, aristula hypochilii utrinque retrorsa minuta, epichilio aequilato trilobulo, lobulis lateralibus obtusis, lobulo medio dentiformi.

Praecedenti similis, recedit praeterea tepalis majoribus subsigmoideis apice aristulatis. Angulus, quem plica lateralis in aristulam excedens facit cum margine anteriori hypochilii major. Septum idem.

5. GONGORA SCAPHEPHORUS Rchb. fil. Wsw. in Seemann Bonpl. II. 98. 1854:

Labelli ungue ante hypochilium minute plicato tuberculato, hypochilii lobis basi ligulato retrorseque auritis, antice obtusangulis minute setiferis, carina interjecta rhombea magna, epichilio compresso triangulo acuminato.

Sepalum summum ovatum acutum basi anguste cuneatum. Sepala lateralia ovata acuta latere superiori rectilinea, latere inferiori curvilinea, ergo dimidiata, tepala minuta, ligulata, acuta, deorsum incurva, latere superiori medio angulata, latere inferiori apicem versus nunc dentata, ad insertionem sepali summi adnata, sub medio gynostemio (ubi omittis pedem). Labellum unguiculatum, incurvum, ascendens, lobi laterales (hypochilii) erecti, foveam saccatam inter se gerentes, limbus superior utrinque bipartitus, portio posterior ligulata, oblique centrum floris spectans, exserta, portio anterior humilior, retusiuscula, obtusangula, apice cum portione apposita conjuncta in laminam quadratam seu rhombeam excurrens, basin versus breviter uniaristulata. Epichilium naviculare apice acutum. Perigonium brunneum fusco guttatum. Labellum superne croceum, inferne purpureum fusco guttatum. — Peru.

Gongora Scaphephorus Rchb. fil. Wswz. Rchb. fil. Bonpl. III. 218:

Hier eine neue Beschreibung nach frischen Blüthen aus dem Garten des Herrn Senator Jenisch, cultivirt von Herrn Kramer. Sepalum summum ovatum acutum, cum gynostemio alte connatum; sepala lateralia oblongosemilunata late acuta basi superiori humerata. Tepala brevissima sub medio gynostemio libera semioblonga apice setaceo uncinata superne obtusangula. Labellum bene unguiculatum, curvatum. Hypochilii parietes erecti prope quadrati, angulus posticus auriculiformis, anticus semiovatus humilis in aristulam exiens. Epichilium naviculare apiculatum parietibus contiguis utrinque prope anceps, media linea inferiori sulcatum. Gynostemium clavatum. Androclinium retusum. Auriculae duae triangulae in margine postico; dens subulatus argutus utrinque antice in summo angulo. Rostelli medium triangulum. Blüthe gross, hellgelb, innerseits mit rothbraunen Pantherflecken, die äusserlich matt durchschimmern. Lippe gelb, mit wenig Flecken.

B. Epichilium ligulatum acutum planum porrectum. Tepala subbasilaria.

6. GONGORA ARMENIACA. *Acropera armeniaca* Lindl. in Paxton Flower Garden I. p. 94. Nr. 140. Xyl. 66. *Acropera cornuta* Klotzsch! in Allgem. Gartenztg. 1852. 186. Lindl. in Paxton Flower Garden III. 574. Prioribus subsimilis. Tepala arcuata aristulata profunde inserta. Hypochilii lobi humiliores apice et basi angulati (postice acute); cristula transversa humillima inter utrumque ante unguem. Septum praecedentium. Epichilium continuum Ex America centrali misit vivam nob. de Warscewicz.

Huc: *Acropera armeniaca* Lindl. l. c. Cf. Walp. Ann. III. 550.

Differs from A. Batemani in its petals being much shorter than the column and perfectly distinct from it; and in the point of the lip being undivided, free, flat. Large flowers, colour like the sunny side of a ripe apricot.

Huc: *Acropera cornuta* Kl. l. c.:

Pseudobulbis caespitosis ovatis, apice attenuatis bifoliatis, foliis oblongis, 3—5 costatis acuminatis, basi longe attenuatis, laete viridibus, racemis basilaribus pendulis sesquipedalibus e viridi purpureis 16—20floris; bracteis lanceolatis acuminatis, perigonii foliolis externis obovatis longius apiculatis fulvis, lateralibus tortis, supremo patentissimo recto, interioribus semilunato lanceolatis brevibus, labello brevi unguiculato, serrato, apice longissime incurvo-cornuto; gynostemio albido, intus ad basin purpureopunctato, germinibus leviter striatis pedicellisque purpurascentibus.

Farbe der *A. Loddigesii*, fahlgelb.

C. Epichilium anceps porrectum. Tepala mediana.

I. Hypochilii cornua basilaria infima subnulla papulas parvulas saepe evanidas referentia.

7. GONGORA BUFONIA Lindl. Bot. Reg. 1841. Tab. 2: *Gongoras irrorata* De Hoffmannsegge Verzeichniss 1843. 53! Cum *G. odoratissima* Lem. maxima omnium. Labellum compressum. Hypochilii lobi a basi angusta ascendentes vertice sinu exciso angusto ab aristis anticis disjuncti, margine inferiori sub aristis bene angulati. Epichilium compressum apice bene uncinatum, basi inferiori angulatum. — Pallide purpurea, punctis guttulisque obscuris aspersa. Patriam nescio.

Huc: Lindl. l. c.:

Hypochilio convexo cornubus lateralibus obsoletis, aristis setaceis, epichilio acuminato paulo breviore, pedicellis columna triplo longioribus.

Brazil.

Upon comparing it with the other species of the genus already in cultivation it is found to differ not only in its singular colour, which is a dull purple, like wine-lees, in the form of very irregular stains and spots, upon a dirty yellow ground, but also in the minuter parts of its structure. It may be distinguished from G. fulva, maculata, and atropurpurea in wanting the lateral horns, which project from the sides of the lower part of the lip in these species. From G. nigrita, which equally wants those horns it differs in having much longer bristles, and a lip altogether longer, especially at the lower half.

II. Hypochilii cornua basilaria minuta aristularum dimidio numquam aequilonga.

1. Cornua basilaria hypochilii deflexa retrorsa.

8. GORGONA RETRORSA Rchb. fil. in Seemann Bonplandia II. 19. (1854):

Racemus pendulus. Sepalum summum lanceolatum, sepala lateralia oblonga obliqua acuta, margine inferiori obtusangula. Tepala linearia

curvula, apice setacea. Labellum longius unguiculatum. Hypochilium angustum cornubus basilaribus abbreviatis retrorsis, margine superiori excisulum sinu obtuse triangulo cum arista erecta, basi aristae in lacinulam obtuse ligulatam excurrente. Epichilium anceps triangulum apice uncinatum, basi inferiori in carunculam a lobis hypochilii liberam excurrens, callo mediano ancipiti obtuso, postice descendente corniculato. Flores straminei purpureo guttulati, hypochilium concolor macula utrinque unica.

In Merida von Herrn H. Wagener entdeckt; blühte bei Herrn Consul Schiller.

8 b. GONGORA AROMATICA Rchb. fil. in Otto und Dietrich Allg. Gtz. 1854. Nr. 36:

Aff. Gongorae retrorsae hypochilio basi rotundato gynostemii basi appresso, margine superiori antice acutangulo, sinu angusto triangulo inter angulum et aristam interjecto, corniculis inferioribus baseos obtusis deflexis, medianis sinu obtusangulo a labelli ungue separatis, hypochilii basi antica in aristam antrorsam excedente, carina mediana obtuse rhombea postice apiculata, epichilio ancipiti, antrorsum acuminato, caruncula basilari inferiori semiovata transverse gyroso sulcata, sepalis extus in nervis mediis carinatis.

Obs. Cum in hac specie cornua basilaria sint deflexa, verbum „retrorsa" in linea 1, superne auferendum.

2. Cornua basilaria hypochilii patula seu erecta.

9. GONGORA STENOGLOSSA Rchb. fil. in Seemann Bonpl. II. 93. (1854):

Hypochilio valde attenuato, ancipiti, cornubus basilaribus submedianis erecto appressis sinum magnum cum aristis efficientibus, epichilio cum carina mediana subconnato.

Racemus flaccidus multiflorus. Sepalum summum lanceolatum acutum. Sepala lateralia ovato triangula incurva. Tepala ligulata apice subulato curvula utrinque gynostemium alato descendentia, more illorum Gongorae quinquenervis Ruiz Pavon inserta. Labelli hypochilium bene unguiculatum, gracillimum, compressum, naviculare; margines superiores membranacei, antice in lobos triangulos subulatos, basi antice falcato triangulos producti; calli baseos submediani trianguli erecti. Epichilium anceps in apicem subulatum reversum extensum, basi inferne angulatum carina carnosa rhombea vertice subulata in basi. Flores straminei purpureo guttati, labellum croceum purpureo guttatum.

GONGORA STENOGLOSSA Rchb. fil. b. GRANDICORNIS Rchb. fil. Bpl. III. 218. Cornubus hypochilii altioribus, tuberculo velutino in ima basi hypochilii inter lobos magis evoluto. Aus dem Garten des Hrn. Pescatore, cultivirt von Hrn. Lüddemann.

10. GONGORA TRICOLOR Rchb. fil. in Seemann Bonpl. II. 93. (1854):

Hypochilio panduraeformi fornicato, cornubus basilaribus conico tuberculiformibus patulis, ab aristis remotis, loborum margine superiori medio angulato, angulo ab acuto sinu semiovato separato, epichilio cum carina mediana connato, basi in triangulum dependens anceps extenso.

G. maculata tricolor Lindl. Bot. Reg. 1847. 69. Pagina inferiori hypochilium bene excavatum. Coloribus fulgentibus et hypochilio crasso fornicato pulcherrima.

Huc. Bot. Reg. XXX. 1844. Misc. 30:

Mr. Clowes received it from Liverpool, with a statement, that it came from Peru. It is a most beautiful var. of G. maculata. — The ground colour of every part of the flower, except the lip, is clear yellow; the column, and petals are delicately banded with rich sienna brown, and a few large clear distinct blotches of the same colour occur on the sepals. The lip itself is white with a cinnamon stain on the ends of the lateral tubercles and the sides of its upper half.

11. GONGORA NIGRITA Lindl. Bot. Reg. 1847. sub tab. 17:

„With the colour of G. atropurpurea, but still deeper this has quite a different lip, not slender at the base, but rounded like G. maculata; and its horns are quite small; the upper part of its lip is singularly slender and bristle pointed.“

Huc: *Gongora nigrita* Lindl. B. Reg. XXV. 1839. Misc. 86:

Hypochilii convexi cornubus lateralibus ascendentibus abbreviatis aristis setaceis, epichilio acuminato apice uncinato breviore.

Much the darkest of the G. the flowers appearing like the deepest puce coloured velvet. It is very nearly the same as G. atropurpurea, but the lower half of the lip is convex, not concave, longer than the upper half, not shorter, and the horns at the sides are very short. It was imported from Demerara by S. Rucker Esq. Jun., who informs me, that the smell is quite diff. from that of G. atropurpurea.

12. GONGORA QUINQUENERVIS Ruiz Pav. Fl. Peruv. Syst. 227:

Hypochilio compresso a basi supraunguiculari rotundato, callis ligulatis appressis seu ascendentibus, marginem hypochilii superiorem non attingentibus; sinu inter angulum anticum et aristam minuto; carina et cornu basilari epichilii ab apice hypochilii tectis.

Gongora maculata Lindl. Bot. Reg. XX. 1835. 1616. Bot. Mag. LXV. 3687. *G. fulva* Lindl. Bot. Reg. XXV. 1839. 51. *G. fulva var. vitellina* Lindl. Bot. Reg. XXVII. 1841. Misc. 4. *G. bufonia var. leucochila* Lindl. Bot. Reg. 1847. 17. *G. leucochila* Lemaire in Van Houtte Flore des Serres I. 37. (hab. ab amic. Kegel). Planta innumeris coloribus magistrix esto illis, qui ex innumeris Mormodis buccinatoria coloribus tot species conflare satius ducunt, quam unam vere stabilitam circumscribere. Mirae illae sunt varietates, quae tepala lateralia margine superiori guttata, margine inferiori concoloria gerunt. Aliae gerunt hypochilia vitellina, aliae candida, epichilium et perigonium vulgo flava seu aurantiaca, nunc totum perigonium albidum. Specimen herbarii Boissieriani Pavonianum schedam gerit: „Gongora novum genus Fl. Peruv. Peru.“ Patria: per totam videtur Americam tropicam crescere. In Guatemala v. Warscewicz! Guatemala: insula Cativo in flumine St. Juan. 611 Friedrichsthal! (Museum Vindobonense!). Peruvia Ruiz! Ex Puerto Cabello introduxit dom. Keferstein. Ex Surinamo in hortum Houtteanum introduxit cl. Kegel.

Huc: *Gongora maculata var. alba* Lindl. Bot. Reg. XXVII. (1841.) Misc. 101:

Among the Orchidaceous plants received by the Hort. Soc. from Oaxaca, a singular var. of Gongora has made its appearance with all the habit of the original: with flowers almost white, except some pale dull wine coloured spots on the sepals. It is a very graceful thing, and forms a good contrast with the old yellow and purple kind.

Huc: *Gongora fulva* Lindl. Bot. Reg. XXV. (1836) 51:

Hypochilii convexi cornubus lateralibus elongatis capitatis aristis setaceis, epichilio acuminato aequilongo, pedicellis columna triplo longioribus.

Mr. Barker sent it Jul. 36., considered it a variety of Gongora maculata, perhaps rightly. But at the same time, till we have a more certain knowledge of the value of O. pl., it seems necessary to distinguish it specifically. The raceme is far more contracted, in consequence of the shortness of the pedicels. Flowers are half the size; the lateral horns of the hypochile are terminated by a round dilated head.

Perigonium flavum, brunneo maculatum.

Huc: *Gongora fulva* var. *vitellina* Lindl. B. Reg. XXVII. (1841). Misc. 4:

Bright yellow flowers less spotted than usual, and altogether of a more lively aspect. Mexico. Differs from G. fulva in having smaller leaves, and the upper half of the labellum distinctly shorter than the lower. It however agrees in so many other respects with that species, that I hesitate to regard it as more than a variety. Oaxaca.

13. GONGORA HISTRIONICA Rchb. fil. in Seemann Bonpl. II. 92. (1854):

Priori similis recedit hypochilii lobis basi anguste cuneatis, sinu inter angulum anticum et aristam magno, epichilio a carina libero, carina et epichilio basin usque ab hypochilio liberis.

Sepalum summum lanceolatum acutum. Sepala lateralia oblongo triangula (inferne exangulata); tepala linearia apice setacea more Gongorae maculatae inserta; labellum distincte, sed breviter unguiculatum, hypochilium anguste compressum a basi sensim ascendens, margine inferiori patenti carinatum, corniculis posticis oblique antrorsis, hypochilio ipsi non aequalibus in ima basi; margo superior curvilineus ascendens apice acutangulus antrorsus, sinum profundum amplum latum cum aristis erectis efficiens. Lacinulae inferiores lineares deflexae; epichilium carinatum, compressum, apice uncinatum, basi progredienti in carunculum a lacinulis anticis hypochilii liberam, carina integra ancipiti triangula prominula in centro.

14. GONGORA ODORATISSIMA Ch. Lemaire in Van Houtte Flore des Serres III. 229:

Recedit a praecedentibus hypochilio latissimo illi Gongorae tricoloris Rchb. fil. haud dissimili, cornubus divaricatis arcuatis hypochilii altitudine subaequilongis quasi basi cordato!

Inde huc referenda: *Gongora maculata* Lindl. in Bot. Reg. 1847. sub 17. (et eadem Lindl. in horto Ruckeriano!), sinu inter angulum et aristulam subevanido, epichilii caruncula basilari ab hypochilio semilibera. Planta valde compacta semel recognita numquam cum ulla miscenda. Variat tot coloris lusibus, quot Gongora quinquenervis. Huc *Gongora Jenischii* Hort., *G. Boothiana* Hort., *G. Sphepherdii* Hort., *G. vitellina* Hort., *G. quadricornis* Hort. Ex La Guayra vivam misit, quae floruit in horto Kefersteiniano amicissimo. Wagener.

Obs. Diagnosin Lemairei cf. Walp. Ann. I. 783.

III. Hypochilii cornubus basilaribus basin hypochilii excedentibus aristarum dimidia longioribus.

15. GONGORA ATROPURPUREA Hook. Ex Fl. 178. Bot. Mag. 3220. *G. Heisterii* Hort. Colore atropurpureo, hypochilio basi anguste cuneato, depresso, antice utrinque divaricato, epichilio igitur liberrimo facile distinguenda. Epichilii caruncula minuta. Ex Trinitatis insula allatam dicunt.

Species obscura.

16. GONGORA GALEOTTIANA A. Rich. et. Gal. tab. 29. Ann. sc. nat. 1845. p. 25: Pseudobulbis oblongis compressis costatis diphyllis. foliis elliptico-lanceolatis; floribus luteolo viridibus purpureo-punctatis; labello luteo unicolore. Mexico.

Obs. Cf. *Gongora Donckelaariana* Lem. in Walp. Ann. III. 546. Felicem, qui recognoscet! —

1423. CORYANTHES *Hook.*

Bot. Mag. t. 3102.

Bullet. Bot. N. 1855. p. 354: Manière, sur la sécrétion par l'organe glanduleux des Coryanthes.

Lindl. Folia I. „Oct. I. 1852." Monographia:

Sepala patentissima, membranacea, libera, flexuosa, conduplicata, columnae basi oblique inserta, lateralibus maximis. Petala multo minora, angusta, erecta, torta, pariter oblique inserta. Labellum cum basi columnae continuum, ab apice brachii (unguis) validi horizontalis pendulum; epichilium maximum, galeatum, deorsum (mesochilium) involutum; basi supra brachium hypochilio poculiformi subtrilobo instructum. Columna elongata, teres, clavata, abrupte recurva, apice utrinque alata,

basi cornubus 2 melliferis (staminodiis ?) aucta. Stigma rima transversa. Pollinia 2, compressa, postice sulcata; caudicula lineari, sigmoidea; glandula lunata. Anthera carnosa, bilocularis; valvulis triangularibus reflexis. Herbae epiphytae Americae tropicae, pseudobulbosae. Folia nervosa. Racemi radicales, pauciflori, penduli.

This genus has the largest flowers known among Orchids; and it is, perhaps, the most extraordinary in its form. All the species are epiphytes, with long strongly-furrowed pseudobulbs, bearing thin ribbed leaves, which vary in breadth with the age and health of the plants. The flowers hang down, singly or in greater numbers, in the same manner as in Stanhopea, to which the genus bears some relation. Their most striking features are the column and lip, which are guarded by thin broad membranous sepals that are unable to bear their own weight, and, after a time, resemble bat's wings, soon collapsing and losing their form. The lip has the form of a bucket, into which a pair of stumps or fingers constantly distil a sweetish colourless fluid, which, drop by drop, gradually fills the bucket. The fingers are processes (perhaps abortive stamens) springing from the base of the column; the bucket is sustained by a stiff arm (unguis), which keeps it perfectly steady, so that the honey may not be spilt. The column itself turns back as if to keep its head out of the way of the drops. The use of this singular apparatus is unknown.

1. CORYANTHES SPECIOSA. Hooker l. c. Paxton's Fl. G. III. n. 581. fig. 284. Morren Ann. Gand. II. 15. t. 50:

C. hypochilio hemisphaerico antice pubescente ungui aequali, mesochilio eplicato intus pubescente, epichilio hemisphaerico obtuso margine erectiusculo lobis lateralibus acutis.

Gongora speciosa Hooker in Bot. Mag. t. 2755.

Wild in Brazil. On trees on Victoria Hill near Bahia.

This, the first of the Coryanths, that was discovered, was originally supposed to have erect flowers, and is so represented in the „Botanical Magazine"; but in fact they are pendulous, and necessarily so, as in all the others. The flowers are pale dull yellow, without any trace of spots; there is also a whitish variety in cultivation. Their smell is rather unpleasant. It is by no means easy to distinguish this from *C. maculata*, except by the spots on the flowers of the latter species. The hood affords the surest mark of recognition, being almost exactly hemispherical in this and distinctly curved forwards in maculata. A variety with deeper yellow flowers is figured by Prof. Morren, in the work above quoted, under the name of *C. speciosa vitellina*.

Obs. Cl. Lindley haec emisit: *Coryanthes speciosa* var. *alba* Bot. Reg. XXVI. 1840. Misc. 75: a pale, almost white variety of this extraordinary plant has lately flowered in the collection of T. Brocklehurst, who obtained it from Demerara. The appearance of the plant is described as being intermediate between *C. macrantha* and *maculata*. — *Coryanthes speciosa* var. Bat. Orch. Mex. Guat. 1842. 38: Perigonium brunneum, violaceo pictum. Tepala aquose coerulea coeruleo maculata. Unguis purpurascens. Hypochilium flavum. Epichilium extus purpureum, intus pallide flavo purpureoque maculatum. — Non liquet, nonne potius ad sequentem pertineat. Cupula forsan minus exacte picta. — *Epidendrum galeatum* Velloso Fl. Flum. IX. t. 8. — Rchb. fil.

2. CORYANTHES MACULATA Hooker in Bot. Mag. t. 3102:

C. hypochilio hemisphaerico galeato antice puberulo ungui aequali, mesochilio eplicato intus laevi (?), epichilio hemisphaerico obtuso margine erectiusculo lobis lateralibus acutis.

A. Sepals and petals whole-coloured pale yellow; hood yellow; bucket blotched inside with violet. — Bot. Mag. 3102.

B. Parkeri. Sepals and petals whole-coloured pale yellow; hood dull purple; bucket spotted inside with purple, and with a purple neck.

C. maculata Parkeri. Bot. Mag. t. 3747.

C. punctata. Sepals and petals bright yellow, speckled with red; hood yellow, tinted with reddish orange; bucket pale, speckled and spotted with red.—B. R. t. 1793.

D. Albertinae. Sepals and petals clear yellow, with round crimson spots; hood white, spotted with rich rose; bucket very deep crimson, spotted inside. Flowers larger than usual.

C. Albertinae Karsten, Auswahl t. 1.

Wild on trunks of trees in the forests of Demerara (v. v.); Albertinae near St. Esteban in Venezuela, on trees at the foot of the Cumbre of Valencia—Karsten.

The essential difference between this and the last has been already explained. *C. Albertinae* is a variety of great beauty, but nothing more, as far as can be ascertained from Mr. Karsten's figure and description. It is cultivated in Germany, but has not yet found its way to this country.

Obs. *C. Albertinae* Karsten descr. cf. Walp. Ann. I. 784. — Eadem icon: Van Houtte Fl. Serres VIII. 755. and Pl. 1. Rchb. fil.

3. CORYANTHES SUMNERIANA Lindl. Gard. Chronicle 1856. 452.

4. CORYANTHES MACRANTHA Hooker l. c. Lindl. in Bot. Reg. t. 1841:

C. hypochilio hemisphaerico subtrilobo antice pubescente ungue paulo breviore, mesochilio angustato plicato intus pubescente, epichilio late conico margine patulo lobis lateralibus uncinatis.

Gongora macrantha Hooker in Bot. Misc. t. 80. figure inverted.

Wild in the Caraccas. Lockhart.

Flowers rich yellow, speckled with red, with the hood of the lip and a portion of the bucket rich orange-brown. They are not half the size of *C. Feildingii*; have a hemispherical downy hood and not a broad saucershaped woolly one; the bucket too is always distinctly conical, while that of Feildingii is even flattened.

Obs. Adde: Pescatorea t. 29.

5. CORYANTHES FEILDINGII Lindl. in Journ. Hort. Soc. III. 15. c. ic.:

C. hypochilio subcompresso pateriformi antice tomentoso ungui aequali, mesochilio dilatato plicato et verrucoso intus tomentoso, epichilio subquadrato margine patulo lobis lateralibus uncinatis.

Wild — ? Purchased of a Nurseryman at Northampton, in 1842, by Colonel Feilding.

The general colour of the flower is a pale brownish yellow, a little mottled and stained with cinnamon in an irregular manner. When closed, it is about five inches long and three wide. As it unfolds the sepals and petals, which are membranous, turn back, seem to fold up, and finally hang drooping at the back of the lip and column. The lip is borne by a thick horizontal arm an inch and a half long, which proceeds from the top of the flower-stalk, and consequently from the lower end of the column. Right and left its base are placed two softish fleshy pale ear-like fingers. At the other end this horizontal arm expands into a convex hood, hairy in front but bald on the crown; a little compressed from the back, and two inches across in its principal diameter. From the hood hangs down a large fleshy bucket smooth at the edges, flattened at the end, two inches deep and as many wide, and connected with the hood by a hollowed fleshy stalk, which is strongly marked by various transverse fleshy folds, warts, and ridges. On the side next the column the bucket is opened, and near the bottom of the opening is furnished with three fleshy lobes, of which the sharp-pointed laterals curve downwards and the middle one stands erect, rising just high enough to come in contact with the head of the column, which grows downwards so far as almost to touch it. The column is two inches and a half long, and throws back its head till its bosom becomes so round and large as to be comparable to the breast of a „puffer“ pigeon. The head of the column divides into two short flat fleshy curved arms, between which the anther is seated.

1424. ANGULOA *R. Pav.*,

Flor. Peruv. Prodr. 118. t. 26.

Lindl. Bot. Reg. XXX. 1844. sub 60:

Flores subglobosi, nunquam patentes. Sepala lateralia invicem imbricantia, basi valde convexa, nec in cornu producta; alterum nunc anticum, nunc posticum, conforme, basi plenum. Petala sepalo dorsali aequalia et similia. Labellum coriaceum, unguiculatum, subconvolutum, trilobum, lamina carnosa lata plana supra medium auctum, hinc quasi bilabiatum. Columna teres, clavata, libera; clinandrio nunc muticо, nunc lacinia acuta porrecta utrinque aucto. Anthera galeata, valvis membranaceis, nunc in lacinulas acutas productis. Pollinia 4, plana, inaequalia, caudicula longa lineari et glandula acuta. Herbae epiphytae Granatenses et Peruvianae, Lycastis facie.

Lindl. l. c. sub 63: Anguloa is distinguished by its authors by a „chrysalis-shaped lip" and the „twohorned column". The rolled up form of the lip is common; processes of column are a very doubtful character. Pollenmasses and gland of Anguloa uniflora are not distinct from these of Lycaste Deppii. The funnel-shaped middle lobe of lip occurs in Lycaste aromatica. But that appendage is attached to the lip by the base only in Lycaste, while in Anguloa it is united by the sides also. The main difference is this: in Lycaste the lateral sepals are placed edge to edge in the manner of a true Maxillaria; but in Anguloa they overlap each other very considerably. This gives to Anguloa the look of Mormodes.

Jamieson in Hook. Lond. Journ. II. p. 658: The fine genus Anguloa, a native of the province of Loxa produces a flower, which from some fancied resemblance to a bulls head, has received the name of „el Torito."

1. ANGULOA UNIFLORA R. Pav. Syst. 228. Bot. Reg. XXX. 1844. 60:

Pedunculo unifloro radicali squamis inflatis imbricanti vaginatis, flore bractea spathacea herbacea parum longiore; sepalis lateralibus anticis petalisque acuminatis, labelli glabri lobo medio angustissimo reflexo, lateralibus rotundatis, lamina appendiculari retusa duplo latiore, clinandrio lacinulis acutis aucto.

Mr. Barker flowered it, we believe among Linden's collections in Columbia. According to Ruiz and Pavon it is found in precipitous places about Menna and Chincao in Peru, and profusely in the wood of Tarma, where it is called „Carpalis."

Perigonium luride album; labelli maculis quibusdam roseolis.

Fig. 2. shows the column with the two thin sharp pointed processes, which project forward; it will be remarked upon comparing this fig. with that in the centre of the flower, that there are in the latter two additional plates, looking like lappets. These bodies were missing in the first flower that we saw, and were only present in the second; they belong to the sides of the anther and are, it is to be supposed, accidental developments.

Bonpl. II. 280. Wälder in Ocanna. Juli. 4—5000'. Nr. 43. Schlim.

Rchb. fil. Bonpl. III. 67. St. Marta. Wagener. März. Blüthe weiss, mit rosafarbigen Punkten. Sehr wohlriechend. — Bot. Mag. 4807.

Huc: *Anguloa virginalis* Gard. Chronicle 1851. p. 392.

2. ANGULOA CLOWESII Lindl. Bot. Reg. XXX. (1844). Misc. 29:

Pedunculo unifloro radicali laxe squamato, flore carnoso resupinato, sepalis petalisque ovatis convexis conniventibus, labelli trilobi lobo medio piloso, infundibulari bilabiato, labio altero emarginato, altero tridentato, columna integra.

Mr. Clowes obtained it from Linden's Columbians collections. It is a noble plant. The flowers are 4" diam., of a clear lemon colour with a pure white lip.

Hook. Bot. Mag. 4315: var. floribus flavis labelli lobo medio aurantiaco.

Lindl. Orch. Lind. p. 21: in low bottoms in the midst of forests near the Indian village Jaji, growing on the ground. Found only, in one spot in the province of Merida, at the height of 5500'. Aug. 1842. Linden. — Rchb. fil. Bonpl. III. 67: Ocanna. Wagener! l. c. II. 15. Merida 7000'. December. Wagener. — Pescatorea t. 17.

3. ANGULOA RUCKERI Lindl. B. Reg. XXXII. (1846). t. 41. Walp. Ann. I. p. 784. — Rchb. fil. Bonpl. II. 15: Caracas 5000'. März. Wagener. — Gardn. Chronicle 1854. 271: *Anguloa Ruckeri* var. *sanguinea*. A fine variety of this rare plant has just blossomed with Messrs. Rollisson. Instead of being yellow with blood red dots, like the original, the inside of the flower is one uniform rich chocolate brown; the terminal lobe of the lip is moreover broader, and concave, not flat. It is a fine variety of its kind (? *Anguloa Ruckeri* var. *Wagneri* Regel Gartenflora III. 387. Tab. 106. Num potius *A. Clowesii*? Haud adeo exacte depicta.)

1424²/. LYCASTE *Lindl.*

B. Reg. XXIX (1843). p. 14.

Flores ringentes, petalis saepius dissimilibus, in mentum breve producti. Labellum medio appendice transversa carnosa integra vel marginata auctum. Columna elongata, semiteres, saepius pilosa. Pollinia 4, per paria caudiculae angustae elongatae adnata; glandula parva subrotunda; rostello subulato.

Herbae pseudobulbosae, foliis plicatis. Scapi radicales erecti, uniflori. Flores semper speciosi bractea magna spathacea suffulti.

1. LYCASTE AROMATICA Lindl. l. c. p. 16: *Maxillaria aromatica* Hook. Ex. Fl. 219. L. O. n. 20. Bot. Reg. XXII. (1836). 1871. *Colax aromaticus* Spreng.

Pseudobulbis compressis rugosis, foliis pluribus, oblongolanceolatis membranaceis, pedunculis radicalibus unifloris erectis, vaginis distantibus obtusis cucullatis, sepalis ovato-oblongis petalisque conformibus acutis, labelli semicylindracei sepalis aequali laciniis lateralibus acuminatis obtusis intermedia cuneata apice serrulata; appendice magna concava carnosa truncata, columnae facie villosa.

Mexico.

The flowers yellowish orange, scarcely spotted even inside the lip, which has two rows of hairs along its inner face.

var. *retusa* Lindl. Bot. Reg. XXX. 1844. Misc. 47:

Floribus vitellinis, labelli lobo medio dilatato retuso.

Mr. Barker Esq. received it from Lima. It differs from *L. aromatica* in having very clear yolk-of-egg-yellow flowers without a tinge of green, and the middle lobe of the lip dilated and almost twolobed.

2. LYCASTE CONSOBRINA Rchb. fil. in v. Schl. B. Z. 1852. 669:!

Perigonii phyllo supremo oblongo cuneato acuto, phyllis lateralibus internis subaequalibus, latioribus, basi inferiori obtusangulis, lateralibus internis oblongis, basi cuneatis, medio dilatatis, acutis, quam phylla externa medio latioribus, glabris, labello basi naviculari excavato, elongato, phyllis externis subaequilongo, medio trilobo, lobis lateralibus ligulatis obtusis angustis, erectis, abbreviatis, callo magno supino laminaeformi acie libera antrorsa obtusato inter utrumque basesque loborum transgrediente, lobo medio producto oblongo crispulo, apice vix emarginato; gynostemio elongato, gracili, antice papillis filiformibus puberulo, labio stigmatis inferiori parvulo, lunato.

Nächst *Lycaste cochleata* Lindl., allein durch Gestalt der Lippe (kurze Seitenlappen und langen Mittellappen) sehr gut unterschieden, auch durch kahle seitliche innere Hüllblätter. — *Lycaste aromatica* hat einen am Grunde keilförmigen, kurzen Mittellappen der Lippe, die Unterlippe der Narbe ist zweizähnig, die Platte auf der Lippe ist an den Seitenrändern frei. Blüthen kleiner. — *Lycaste crinita* Lindl. hat längere Seitenlappen der Lippe, dieselbe und seitliche innere Hüllblätter behaart. Die Lippenplatte klein, Farbe der *Lycaste aromatica* Lindl.

3. LYCASTE CRINITA Lindl. B. Reg. XXVI. (1844). Misc. 41:

Sepalis petalisque intus crinitis, labello intus villoso alte trilobo, laciniis angustis obtusis, intermedia ovali, appendice lineari adnata; facie L. cruentae.

This is much like L. cruenta and has flowers of nearly the same colour; but it differs in being smaller, with the interior clothed with very long silky hairs, and in the different form of the lobes of the lip, which is moreover destitute of the crimson stain, that gives its name to L. cruenta. The appendix of the lip is moreover long and elevated, not very short and inconspicuous.

Lindl. Paxt. Fl. G. I. 127. sub 181:

Lip narrowly oblong, slightly speckled; lateral lobes linear, blunt, nearly as long as the equally narrow hairy oval central one; appendix is conspicuous, terminating a narrow shaggy elevation. Column long, slightly hairy. Petals very hairy. Mexico.

Petals yellow, very acute, much smaller, than greenish sepals.

4. LYCASTE COCHLEATA Lindl. l. c. 126:

Lip nearly circular, not spotted; lateral lobes long, rather acute; central flat, circular; emarginate; slightly crisp; appendix entire, as large, as the lateral lobes.

Column long, hairy. Petals hairy. Nat. —. Deep orange: sepals and petals obtuse, not much smaller, than the former.

5. LYCASTE CHRYSOPTERA Morr. Ann. Gand. 292. Lindl. Paxt. Fl. G. l. c.:

Lip roundish, spotted, lateral lobes short, central lanceolate acute toothletted; appendix 3lobed. Column hairy. Petals naked. Mexico.

Deep orange yellow flowers. Seems like L. cruenta, but according to Professor Morren its flowers are much larger, colours more brillant, details of lip different, appendix being 3lobed; and the middle division of the lip lanceolate, acuminate, and toothletted.

6. LYCASTE MACROBULBON Rchb. fil. Walp. Ann. I. 782. Lindl. Paxt. Fl. G. Cf. Walp. l. c. — Rchb. fil. in v. Schl. B. Z. 1852. 669:

Diese ist die *Anguloa aurantiaca* westlicher Gärten. Die von Herrn Prof. Lindley gewünschten Aufschlüsse sind folgende: innere seitliche Hüllblätter am tiefsten Grunde mit wenigen fadigen Papillen besetzt. Vorderfläche der Säule und Grund der seitlichen äusseren Hüllblätter tragen ebenfalls dergleichen Organe. Die Lippe ganz kahl.

Londini ex Sierra Nevada Marthae a Purdie missa floruit. Praeterea in horto Lindeniano ex Nova Granata.

7. LYCASTE CRUENTA Lindl. l. c. p. 16: *M. cruenta* Lindl. B. Reg. 42. t. 13:

Pedunculis raro bifloris, vaginis distantibus obtusis cucullatis, sepalis ovatis obtusis, lateralibus basi parum productis, petalis minoribus conformibus, labello sepalis duplo breviore concavo trilobo laciniis rotundatis, intermedia crispa pubescente; tuberculo parvo plano, columna pubescente.

Guatemala.

Resembles L. aromatica, but its leaves are broader; the flowers are 4 times as large, when in health; the lip has quite a different form, with a deep crimson blotch at its base and is not half the length of the sepals; the middle lobe is rounded, not unguiculate, and has only a small tubercle in the middle instead of the large concave appendage, that occurs in L. aromatica.

Huc: *Maxillaria Skinneri* Lindl. hort. (B. Reg. XXVIII. 1842. Misc. 13.). *Lycaste balsamea* A. Rich.

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8. LYCASTE TETRAGONA Lindl. Bot. Reg. l. c. Misc. 64: *Maxillaria tetragona* Lindl. Bot. Reg. 1428:

Pseudobulbis ovatis tetragonis, foliis oblongo-lanceolatis plicatis solitariis, floribus radicalibus solitariis (vel racemosis), sepalis oblongis obtusis patulis, petalis conformibus paulo minoribus, labello carnoso ventricoso trilobo erecto, lobis lateralibus parvis acutis intermedio ovato extus convexo, disci appendice crassa carnosa tabulari incumbente.

Perigonium viridifuscum. Labellum intus atroviolaceum, extus sordide album.

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9. LYCASTE SKINNERI Lindl. Bot. Reg. XXIX. 1843. pg. 15: *Maxillaria Skinneri* Bat. Bot. Reg. 1842. Misc. 13:

Pseudobulbis subrotundis ovatis triphyllis, foliis lanceolatis acutis plicatis scapo laxe vaginato ascendente duplo longioribus, bractea herbacea acuta cucullata ovario multo longiore, sepalis patentibus oblongolanceolatis acutis, petalis duplo brevioribus ovalibus erectis supra columnam convolutis apicibus reflexis; labelli trilobi lobis lateralibus erectis truncatis, intermedio longiore ovato rotundato, deflexo, appendice carnosa linguaeformi inter lacinias laterales locata; columna subtus pubescente.

The flowers measure upwards of 6" across from the tips of the lateral sepals, while the latter are nearly one and half wide in the broadest part. The sepals are pure white, faintly tinged with crimson at the base; the petals of a more rosy hue, the lip is almost covered with spots and streaks of the most brilliant carmine. The column is pure white at the apex, and mottled with crimson spots at the base; while a number of woolly hairs are scattered on its under side.

Bateman Orch. Mex. Guat. 35. — Bot. Mag. 4445. — Pescatorea 37.

10. LYCASTE DEPPII Lindl. l. c. (*Maxillaria Deppii* Lodd. Bot. Cab. 1612. B. M. 3395):

Scapo foliis breviore; vaginis ventricosis acuminatis, sepalis oblongo lanceolatis patentissimis, petalis minoribus oblongis undulatis conniventibus, labello cucullato trilobo apice recurvo in axi calloso margine piloso subcrenato; laciniis lateralibus rotundatis, intermedia oblonga obtusa callo ovato.

Mexico.

Sepals green and chocolate. Petals white. Lip yellow. — DC. and A. DC. Huit. not. pl. rar. Genèv. (gaudent florem triandrum tepalis nullis).

11. LYCASTE PLEIOCHROMA Rchb. fil. in Otto Hamb. Gartenz. 1860. 179.

12. LYCASTE MACROPHYLLA Lindl. Bot. Reg. XXIX. (1843). p. 14: *Maxillaria macrophylla* Pöpp. Endl. Nov. Gen. I. Sp. 64. Bot. Reg. XXIV. (1838.) Misc. 174. (nec 175 uti vult cl. Lindl. in Bot. Reg. XXIX. l. c.):

Foliis oblongis lanceolatis plicatis, scapo unifloro ascendente laxe vaginato duplo brevioribus, bractea herbacea cucullata acuta ovarii longitudine, sepalis oblongis undulatis patentibus apice recurvis basi intus pilosis, petalis erectis columna longioribus oblongis carnosis apice recurvis margine postico versus apicem sublobato, labello breviore ob-

longo concavo apice trilobo, lacinia intermedia subrotunda crenata pilosa, appendice linguaeformi concava adnata inter lacinias laterales rotundatas incurvas, anthera villosa.

Peru.

Flowers greenish, with a little purple on the lip. According to Pöppig it inhabits dry thickets. — Loddiges imported it from Columbia.

Rchb. fil. Bonpl. III. 67. St. Marta. März. 6000'. Wagener.

Rchb. fil. Bonpl. II. 15. Caracas. 5000'. October. Wagener.

Bot. Reg. XXVI. 1840. Misc. 191. Mr. Loddiges has flowered a new variety from Bolivia (487) with the inside of the sepals and the tips of the petals stained with purple. It does not otherwise differ from the original form of the species.

Hue (quicquid dicat ill. Lindley):

Lycaste plana Lindl. Bot. Reg. XXVIII. 1842. Misc. 96:

Bractea suprema cucullata ovario longiore, sepalis oblongis planis basi in cornu brevi conico connatis, petalis conformibus apice tantum recurvis, labelli trilobi lobis lateralibus apice crenulatis, intermedio subrotundo serrato callo elevato obtuso obsolete trilobo, columna pubescente, anthera villosa.

Bolivia imported by Loddiges. Flowered Octob. It differs from L. macrophylla in the petals being quite even, not undulated, and in the lateral sepals being much more exactly oblong. Added to which is a greater degree of bluntness on the tubercle of the lip.

Sepala extus viridia, intus rubentia, petala, columna, labellum alba, rubro picta.

B. Reg. XXIX. 1843. pg. 15. sub Misc.: The tubercle on the lip is also much more obtuse. In colour too they are different. Peru.

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13. LYCASTE LEUCANTHA Klotzsch Allg. Gartenztg. 1850. p. 402. *Maxillaria leucantha* Klotzsch eod. loco.

Bracteis distantibus membranaceis, striatis, aridis, fuscescentibus, cucullatis, acutis, suprema ovarii longitudine; perianthii foliolis exterioribus oblongis, patentibus, versus apicem recurvis, pallide flavo virescentibus, interioribus candidis, in tubum imbricato conniventibus apice recurvis; labello petalis breviore, albido, trilobo, laciniis lateralibus rotundatis, intermedia oblonga obtusa subrecurva, supra hirsuta, margine obsolete dentata, appendice linguaeformi, concava, adnata, inter lacinias laterales.

Bl. 3" Durchmesser. Gelbgrünlich. Säule fein behaart.

14. LYCASTE TRICOLOR Klotzsch Allg. Gtz. 1852. 85. *Maxillaria tricolor* Klotzch l. c.:

Bracteis membranaceis elongatis acuminatis, convolutis, densis, viridibus, suprema ovario duplo longiore; perianthii foliolis exterioribus oblongis brevissime acutis patentibus arcuatim recurvis pallide rufescentibus, intus ad basin subvillosis, interioribus brevioribus roseis obovatis, utrinque glabris, inferne subconniventibus, apice recurvis; labello trilobo saturate roseo glabro petalis parum breviore, laciniis lateralibus rotundatis subinvolutis, intermedia oblonga unguiculata subrecurva, margine inciso dentata, appendice ovata marginata libera suberecta brevi ad apicem inter lacinias laterales, gynostemio candido, glabro, arcuato, ad basin internam purpurascente.

3 Hüllblätter des äussern Kreises hellbraunroth, 1½ Zoll lang, ½ Zoll breit, an der innern Basis etwas zottig; die des innern Kreises rosa. Lippe kahl, rosa, nach innen dunkler punktirt. Anhängsel tritt hier nur unterhalb der Basis des Mittellappens als 1½ Linie langer Körper auf. Guatemala. v. Warscewicz. Nauen c. Giroud.

15. LYCASTE CANDIDA Lindl. Paxt. Fl. G. II. p. 37. N. 297. xyl. 151. 152. obiter et sub falso nomine *L. leucantha* Klotzsch.

First blossoms last December, called Lycaste candida, small, and great varieties. Among the dwarfest of the genus, its flowers scarcely reaching higher than the lower part of the leaves. A few distant sheathing scales cloth the scape. The bract immediately beneath the flower is inflated in the middle, green, and contracted at the base and as long as the ovary, which it nearly conceals. Flowers by a curve of their slender stalk arch over, so that, when fully expanded, they present their whole face to the eyes of the observer. Sepals oblong, rolled back at the point, somewhat wavy. Petals have same form, smaller, when flower is young, roll together at the lower half, so as to form a short tube. Lip pure white, slightly trilobed, a little toothed at the edge, very concave, slightly hairy on the upper side, with a narrow, blunt, chanelled appendage, lying along the middle, and not advancing more to the front, than the separation of the obscure, round, lateral lobes of the lip. Column shaggy in front. Approaches Lycaste plana more nearly, than any other, but differs not only in its smaller size and more delicate habit, but in the middle lobe of the lip being concave, and slightly toothed, not convex, serrated and plaited; the appendage too is linear, not toothed; and the lip itself slightly, not deeply trilobed. It belongs to that part of the genus, which is formed by L. Skinneri, plana and their allies. Central-Amerika. Warscewicz.

Huc: *Lycaste brevispatha* Klotzsch (*Maxillaria brevispatha* Klotzsch) in Berl. Allg. Gtz. 1851. Nr. 28. p. 217:

Bracteis distantibus membranaceis, aridis, fuscescentibus, superne magis inflatis, brevissime acutis, suprema ovarium vix attingente; perianthii foliolis exterioribus oblongis, patentibus apice recurvis, pallide flavido-virescentibus, intus ad basin villosulis, interioribus candidis, basi roseo tinctis, sparsimque pilosis, apice recurvis; labello petalis breviore, albido, trilobo, glabro, laciniis lateralibus apice truncatis, intermedia oblonga, obtusa, recurva, appendice linguaeformi concava adnata, inter lacinias laterales; germine brevi, subincurvo, minutissime atropunctato.

Calcar 4 lineas longum. Perianthii foliola externa 20 lineas longa, 10 lineas lata, interiora 18 lin. longa, 10 lineas lata. Gynostemium 10 lin. longum, subincurvum, planum, pilosum, dorso concavum, glabrum. Labellum 15 lineas longum. Bracteae 8—9 lineas longae. Guatemala. Warscewicz.

A *Max.* (*Lyc.*) *leucantha* Kl. differt: bracteis ovario brevioribus, labello glabro, lobis lateralibus antice truncatis.

Obs. Alia nomina: *Lycaste et Maxillaria biseriata* Klotzsch. *Lycaste et Maxillaria sordida* Klotzsch. *Lycaste et Maxillaria Lawrenceana* Hort. Angl.

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16. LYCASTE SCHILLERIANA Rchb. fil. Bonpl. III. 215:

Aff. L. fulvescenti, tepalis obovatis acutis minutissime velutinis, sepalis duplo brevioribus, labello erecto trilobo, lobis lateralibus medianis semiovatis acutis, lobo medio porrecto ligulato minute denticulato, appendice ligulata retusa utrinque basi extrorsum arcuata, gynostemio medio villoso, basi velutino.

Bractea acuta ovario plus duplo longior. Sepala tripollicaria lanceolata acuta olivacea. Mentum parvum. Tepala et labellum alba, roseo irrorata. Gynostemium albidum, basi aurantiacum. Von Hrn. Consul Schiller aus einer englischen Auction erhalten.

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17. LYCASTE GIGANTEA Lindl. in Benth. Pl. Hartw. p. 553:

Foliis oblongo-lanceolatis quinquenerviis, acuminatis, scapi vaginis distantibus adpressis suprema unguiculata sepalorum longitudine, se-

palis lineari-oblongis obtusis cum apiculo, lateralibus falcatis, petalis lanceolatis brevioribus, labelli oblongi lanceolati trilobi laciniis lateralibus acutis intermedia serrata concava apice integra recurva multo brevioribus, hypochilio lineis duabus elevatis appendice emarginata.

Flores viridis 3 pollices longi. Scapus bipedalis uniflorus. Folia etiam longiora. Ad Quebrada de las Juntas. Hartweg.

Lindl. Orch. Lind. p. 21. (1846. n. 109.): Pseudobulbs very strong. Petals golden yellow. Lip red. — Forests of Merida at the height of 5000—6000'. Aug. It seems to be a variety differing in colour and large size of the flowers. — Lindl. Bot. Reg. XXIX. (1843.) p. 15: bractea herbacea sepalis subaequali, sepalis oblongo lanceolatis, labello lanceolato acuminato — —. Bot. Reg. XXX. 1844. Misc. 48: It proves to have a very different aspect from any of the species associated with it; its flowers, whose sepals are $3^1/_2$ inches long being of a warm yellowish olive and its lip a deep rich maron bordered with orange, and looking like the finest velvet.

Huc: *Maxillaria Heynderycxii* Morr. Ann. 1845. 9:

Pseudobulbis maximis, oblongo ovatis, glabris, compressis, marginibus obsoletis; foliis subternis oblongo-lanceolatis, acuminatis', plicatis, albo-nervosis; scapo radicali, vaginato, articulato, unifloro, pseudobulbo longiore, perigonii foliolis concoloribus, conformibus ovato-lanceolatis, obtusis; labelli trilobi lobis lateralibus elevatis, angustis, lobo medio panduriformi, reflexo', fimbriato; callo unico, sellaeformi, transverso; orbiculari, per hypochilium decurrente.

Perigonii phylla 5 brunneo flava, labellum atropurpureum. La Guayra. Funk. Rchb. fil. Bonpl. II. 15. Caracas. Wagener.

18. LYCASTE FULVESCENS Hook. Bot. Mag. (III. Ser. 1. Vol.) 4193:

Bractea herbacea ovario longiore, sepalis lanceolatis lateralibus falcatis, petalis conformibus paulo minoribus, labello oblongo laciniis lateralibus parvis acutis intermedia ovata obtusissima fimbriata, appendice carnosa emarginata.

Coll. of Clowes. — Flores ochraceo fulvi, labello intus rubello.

Lindl. Orch. Lind. (1846. N. 108.) p. 21: It bears also the name of Lycaste crocea, which I called it before it was published in Bot. Mag. — Rchb. fil. Bonpl. II. 280: Ocanna. 6000'. Maj. 763. Schlim! l. c. III. 67: Ocanna. Wagener.

19. LYCASTE BARBIFRONS Lindl. in Tayl. Ann. Nat. Hist. XV. (1845.) p. 383:

Foliis oblongis in petiolum longum angustatis plicatis, bractea suprema angusta ovario paulo longiore, sepalis petalisque subconformibus lanceolatis falcatis lateralibus in mentum longum productis, labello oblongo basi concavo 5 lineato appendice lata emarginata adnata; lamina oblonga plana basi fimbriata apice rotundata laciniis lateralibus rotundatis, columna antice villosissima auriculis apice falcatis.

Peru (Hartweg).

Very near L. lanipes, but twice as large, and with long-stalked leaves. It also differs in the form of the lip, and in the shaggy column.

20. LYCASTE COSTATA Lindl. Bot. Reg. XXIX. (1843). 15:

Bractea herbacea cucullata acuta ovario multo longiore, sepalis petalisque L. macrophyllae similibus, labello trilobo concavo lacinia intermedia rotundata serrata, appendice carnosa emarginata adnata 5costata inter lacinias laterales; anthera glabra.

Peru.

Quite with the habit of L. macrophylla, but certainly distinct in the foregoing characters. Its colours are unknown.

Huc: *Maxillaria costata* Lindl. B. Reg. XXIV. (1838). Misc. 174:

Foliis lanceolatis plicatis scapo unifloro laxe vaginato longioribus etc. Peru. Matthews 1026.

Huc: *Maxillaria ciliata* Pöpp. Endl. I. tab. 67.

Lycaste costata Lindl. Gardn. Chronicle 1854. 663:

This fine species originally described from a dried specimen found in Peru by Matthews, has just flowered with R. Hanbury, who received it from the Cordilleras. With the habit of L. gigantea it unites pure fleshy green flowers of following dimensions. Sepals $2^1/_2$ inches long by $1^1/_4$ broad, petals rather smaller; chin $^3/_4$ inches, straight, almost cylindrical, and of the same length as the ovary, which is entirely concealed by an ovate hooded green bract, which reaches about $^1/_3$ part of the dorsal sepal. The lip is yellowish white, with a roundish fringed middle lobe, half ovate acute lateral lobes, and a very conspicuous truncated ribbed white appendage. As usual in this genus the lower face of the column is shaggy, with white hairs.

21. LYCASTE LANIPES Lindl. Bot. Reg. XXIX. (1843.) pg. 15:

Bractea obtusa cucullata ovarii longitudine, sepalis petalisque oblongis elongatis, labelli laevis lobis lateralibus ovatis obtusis brevibus, intermedio oblongo obtuso basi serrato, tuberculo obtuso concavo costato glabro, columnae pede villoso.

Guayaquil.

Found by Mr. Hartweg at Paccha, a village on the Andes, in the vicinity of Loxa, and sent to the Horticult. Society. It has pale green flowers, two inches and a half long before they expand, without a trace of any other colour. It differs from L. costata in the flowers being much larger, while the bract is not longer, than the ovary; and from L. gigantea in the very short bract, ribbed tubercle, and rounded not acuminate middle segment of the lip.

Huc: *Lycaste mesochlaena* Rchb. fil. v. Warscew. il. 98:

Aff. L. barbifronti mento elongato, tepalis lanceolatis, labelli lobo medio denticulato.

Pedunculus vaginis cucullatis acuminatis subcontiguis imbricatus, bractea summa lancea ovario multo longior; sepalum summum lanceolatum acutum; sepala lateralia a mento subconico ovario aequali ascendentia, lanceolata, acuta, falcata; tepala lanceolata acuta sepalo summo quarta parte breviora, paulo angustiora; labellum tepalis quinta parte brevius, imo pedi gynostemii adnatum linearilanceum, medio dilatatum, trilobum, lobi laterales oblique trianguli, margine postico curvilinei, lobus medius productus ovatus acutiusculus, margine denticulatus; costae 5 validae carinatae a medio ungue usque inter lobos laterales producti, ibi in appendicem obtusam medio excisam excurrentes; gynostemii frons superior ac infima nuda, pars suprabasilaris dense lanata. Blüthe wenig kleiner, als die der L. barbifrons Lindl., deren Tepala viel breiter, grösser; deren Kinn viel kürzer, deren Mittellappen an der Lippe gefranst ist. Peru. v. Warscewicz.

22. LYCASTE CILIATA Lindl. Herb. Mss. et Bonpl. IV. 1856. 324:

Labelli laciniis lateralibus triangulis antrorsis lobulatis, lacinia antica ovato saccata ciliata, callo basi in basin laciniae anticae ibi abrupto, ceterum quinquecostato.

23. LYCASTE REICHENBACHII Gireoud Bonpl. IV. 1856. p. 324.

24. LYCASTE BARRINGTONIAE Lindl. Bot. Reg. XXX. (1844). Misc. 54. (L. O. 147. *Maxillaria Barringtoniae* Lodd. B. Cab. 1824. *Maxillaria ciliata* Fl. Peruv. Syst. 221? Lindl. Bot. Reg. 1206):

Pseudobulbis oblongis compressis costatis, foliis subternis oblongolanceolatis acuminatis plicatis, scapo radicali vaginato unifloro erecto pseudobulbo vix longiore, bractea ovarii longitudine, sepalis petalisque

ovato lanceolatis obtusis, labelli trilobi lobo médio ovato rotundato fimbriato apice concavo; callo lato omnino adnato alte sulcato apice dentato.

An examination of fresh specimens of this old plant enables me to state, that it is a true Lycaste, readily distinguished by its stout flower stems, drooping flowers and very deeply furrowed callus. The blossoms appear to vary in colour from green to a tawny yellow.

Lond. Journ. Bot. III. 508: Kingston Purdie.

1425. PERISTERIA *Hook.*

Bot. Mag. 3116. — Lindl. Bot. Reg. XXIX. (1843.) Misc. 99. haec:

Perianthium globosum. Sepala basi connata concava. Petala conformia, paulo minora. Labellum cum columna continuum, epichilio carnoso incumbente indiviso cum hypochilio sagittato leviter articulato. Columna erecta, semiteres, aptera cum hypochilio continua. Anthera ecristata, bilocularis. Pollinia 2, postice fissa; in glandulam linearem sessilia.

Herbae subterrestres, pseudobulbosae. Folia plicata. Scapi vaginati, radicales, multiflori. Flores speciosi.

1. PERISTERIA ELATA Hook. Bot. Mag. 3116. Lindl. B. Reg. XXIX. (1843). Misc. 99:

Scapo erecto orgyali, racemo laxo elongato, epichilio rotundato serrulato medio elevato calloso, hypochilio maximo, lobis obtusis disco unidentatis columna longioribus.

Panama.

Flowers white, with lilac specks on the base of the lip. Very sweet scented. Stem some times 6' high.

Rchb. fil. Bonpl. II. 19. Truxillo. 6000'. Wagener.

2. PERISTERIA PENDULA Hook. B. Mag. 3479:

Scapo brevi paucifloro, columnae alis seu lobis parvis porrectis, labelli basi disco cristato crassso, lobo superiore disco canaliculato ecristato.

Perigonium pallide flavum, rubro et brunneo maculatum.

Imported from Demerara by John Allcard Esq.

Bot. Reg. XXX. (1843). sub Misc. 99. (*P. maculata* Hort.):

Scapo brevi pendulo, racemo denso, epichilio rotundato integerrimo supra bilamellato, hypochilio elongato lobis rotundatis callo maximo lunato in medio, columna bicorni, rostello truncato. Demerara.

Flowers pale purple, spotted with lilac, with a scarcely pleasant aromatic odor.

3. PERISTERIA CERINA Lindl. B. Reg. XXIII. (1837.) 1953:

Scapo brevi pendulo, racemo denso, epichilio ovato emarginato crispo serrulato, hypochilii lobis brevibus acutiusculis, columna mutica, rostello truncato.

Central-Amerika.

Flowers yellow, unspotted, with the smell of bruised juniper leaves, only more aromatic.

Pseudobulbus oblongus vel ovatus, atroviridis, tripollicaris, apice folia generis oblongo lanceolata, plicata, basi vaginantia, pedalia et ultra. Scapus brevis, vaginatus, pendulus, rigidus, racemo denso, 9—10 floro, secundo onustus, sepala et petala colore et textura ceraceo lutescenti immaculata, obtusa. Labellum trilobum cum basi producta columnae articulatum, ejusque faciei appressum, lobis lateralibus ovatis,

acutis, planis, intermedio abrupte inflexo ovato, emarginato, margine crispo et croceo, ceterum colore sepalorum. Columna crassa, ovata, semiteres, aptera. Pollinia 2 biloba, in glandulam triangulam sessilia. Flores juniperum spirant.

var. *guttulata* Rchb. fil. in v. Schl. B. Z. 1852. 763: major, epichilii disco verruculoso. Ich verdanke diese Pflanze der freundlichen Mittheilung des Herrn Josst im gräflich Thun'schen Garten zu Tetschen. Derselbe hat sie in seiner „Beschreibung und Cultur der Orchideen" p. 334. unter *Peristeria guttata var. violacea* beschrieben und bemerkt, er habe sie von Hrn. Van Houtte bezogen. Sie gehört aber zu *P. cerina*, weil die seitlichen Lappen der Lippe sehr entwickelt sind; auch ist die Lippenspitze ausgerandet. Die Blüthenfarbe ist ochergelb mit vielen Purpurflecken, Mittellappen der Lippe stark purpurfarbig.

4. PERISTERIA GUTTATA Knowles Westc. Floral Cab. II. tb. 70. (1838):

Scapo brevi, pendulo, multifloro, racemo denso, secundo, labello dimidio inferiori disco crasso concavo, lobis lateralibus vix conspicuis, superiore ovato, margine denticulato, apice integro abrupte incurvo, intus tuberculis minutissimis obsito; columna aptera.

Flowers erect, fleshy, ventricose, of a pale salmon colour, copiously marked within and without with spots of a reddish purple or maron colour, and emitting a powerful, peculiar and agreeable odour. Upper sepals ovate oblong, obtuse, lateral ones enlarged and tumid below, embracing and united with the base of the labellum. Labellum jointed in the middle, the upper portion or lobe erect, purplish at the apex, lying against and partly embracing the column; the inferior portion concave, with a fleshy border extending from the joint to the base of the column. Column thick, semiterete, spotted, much dilated.

Bot. Reg. XXVII. (1842.) Misc. 33: Allied to pendula, from which it differs in the colour, the shape and the smaller size of the flowers, in the absence of wings from the column, and in the scarcely developed lateral lobes of the labellum. It is much more nearly allied to *P. cerina* of the Bot. Reg., with which it agrees in the general shape of the flowers and the denticulated margin of the middle lobe of the labellum, but differs from it in the colour and copious markings of the flower, in the entire, not emarginate point of the middle lobe and in the absence of distinct lateral lobes. Still however the resemblance between them, except in colour, is so great, that we question, whether our plant may not eventually be considered a spotted variety of *P. cerina*. Said to have been imported from Rio Janeiro — but this is doubtful. Flowered with Mr. Barker.

Lindl. Bot. Reg. XXIX. (1843). sub Misc. 99:

Racemo denso pendulo, epichilio rhombeo-oblongo serrulato leviter verrucoso, hypochilio brevi lobis acutis, columna mutica, rostello brevi.

Demerara.

Flowers deeply speckled with brownish purple, on a pale dingy ground, rather agreeably sweet-scented with an aromatic resinous odour.

1425 b. ACINETA *Lindl.*

Bot. Reg. XXIX. (1843). Misc. 100.

Perianthium carnosum patulum, sepalis basi connatis supremo subascendente. Petala conformia, paulo minora. Labellum cum columna continuum carnosissimum hypochilio oblongo concavo, epichilio haud articulato tripartito ascendente, basi appendice carnosa aucto. Columna erecta utrinque in marginem latum rotundatum producta. Anthera ecristata, bilocularis. Pollinia 2, postice sulcata, caudicula lineari, glandula lunata. Herbae Peristeriae habitu.

1. ACINETA SUPERBA Rchb. fil. Mss. *Anguloa superba* H. B. Kth. Nov. Gen. et Sp. I. 343. t. 93. LÓ. 160. *Acineta Humboldtii* Lindl. Bot. Reg. XXIX. (1843) sub Misc. 100:

Petalis quam sepala duplo minoribus, callo labelli lineari simplici, lacinia intermedia biloba, lateralibus cuneatis, columna brevi alis latissimis.

Central-America. — Racemes very long, pendulous. Flowers a rich purplish brown, enlivened by deep spots and blotches of the same. — Bot. Mag. 4156. b. floribus fulvis brunneo purpureoque guttulatis. (Haec: *Acineta fulva* Klotzsch in Allg. Gtz. 1852. 146.) — Van Houtte Fl. des Serres. 992. 993.

Rchb. fil. Bpl. II. 19. Caracas. 5000'. August. Wagener.

Rchb. fil. Bpl. II. 281. Ocanna. Wälder. 5—6000'. Nr. 1195. Schlim.

2. ACINETA SCHILLERIANA Rchb. fil.:

Simillima praecedenti, sed loco tuberculi papuliformis acuti post sellam turcicam adest tuberculum anceps transversum gibbosum.

A. Humboldti var. Schilleriana Rchb. fil. Bonpl. III. 218: labelli lobo antico recto antrorso nec mesochilio arrecto et toto labello elongato. Adsunt formae medianae cum *A. Humboldti vulgari.*

Obs. Moneo, me tum verum characterem seu non novisse, seu, quod potius crediderim, ex memoria amisisse. Rchb. fil.

3. ACINETA SELLA TURCICA Rchb. fil. in v. Schl. Bot. Z. 1852. 705:

Pedunculo pendulo laevi elongato, basi ochreato vaginato, superne florido, flexuoso, bracteis oblongis, acutiusculis, scariosis, ovaria pedicellata non aequantibus, perigonii phyllo summo ovato acuto, lateralibus externis cuneato-obovatis, hypochilio angustiori, excavato, linea erecta semicirculari limbosa a gynostemii basi separato, intus papillis filiformibus aureis sparsis velutino, versus apicem lamina lineari apice trilobula pariter aureo-velutina aucto, epichilio in hypochilii confinio inferne foveato, trilobo, lobis lateralibus reniformibus, appendice plana inferne stipitata inter utrumque, postice bicorni, antice tridentata, dente medio in carinam retrorsam exeunte (cum sella turcica in cranio humano comparabili), lacinula ansaeformi utrinque inter cornu posticum et basin posticam lobi lateralis, lobo medio rhombeo, callo transverso in ima basi, gynostemio gracili dorso et facie pilis compressis aureis hirto, alis semiovatis.

Chiriqui: Cordillerenketten. Juli. 6—8000'. *Ac. Humboldtii* Lindl. hat eine knieförmig gebogene Lippe mit keilförmigen Seitenlappen, das Anhängsel ist an den Seiten ganz frei, das Horn steht versteckt unter der hinteren Hälfte des Anhängsels. Die Säule ist kurz mit grossen knorpeligen Flügeln. — Viel näher steht *Ac. Barkeri.* Diese hat eine lange Säule mit kurzen Flügeln, die fast gerade Lippe hat unterseits dieselbe Grube, genau derselbe Plan ist befolgt: unsere Art hat etwas grössere Flügel, ganz verschiedene Seitenlappen der Lippe (dort rautenförmig, hier nierenförmig!), dazu die Hörner der hinteren Sattellehne. Zwischen ihnen eine Vertiefung der Platte, bei *A. Barkeri* im Ganzen 4 kurze Zähnchen in Einer Ebene. Hrn. Bateman's Abbildung und Beschreibung sind unrichtig („columna aptera", gegliederte Lippe). — *Ac. densa* Lindl. trägt Warzen auf dem Grund des Mittellappens der Lippe und hat beilförmige Seitenlappen. Dazu ist der Blüthenstiel dicht mit Papillen besetzt. — *Ac. chrysantha* Lindl. (mir unbekannt) hat eine ganz viereckige Mittelplatte und ganz kleine Säulenflügel. Sie ist leider von Hrn. Prof. Lindley nicht genauer beschrieben, ich entnehme das der Beschreibung des Hrn. Prof. Morren (*Neippergia chr.* —). Für den Fall, dass *Peristeria longiscapa* A. Rich. et Gal. zu *Acineta* gehört, hat der Verf. bei Beschreibung der Blüthe „floribus parvulis luteolis; labello violaceo, unguiculato, trilobo" durch das Wort „parvulis" wohl wahrscheinlich gemacht, dass eine andere Art vorlag.

4. ACINETA ERYTHROXANTHA Rchb. fil. Bonpl. II. 92:

Aff. A. Barkeri: sella turcica per medium carinata, antice rectobidentata, postice quadridentata; gynostemii alis retusis, androclinio dentato.

Sepala ovalia acutiuscula, summum cucullatum; tepala oblongo cuneata acutiuscula; labelli hypochilium carnosissimum, canaliculatum, parce puberulum, utrinque medio margine involutum, ideo medio constrictum; pseudarthrosis impressa sub lobis lateralibus; sella turcica stipitata, postice dilatata, antice bidentata, interjecto denticulo sc. apice extremo apice carinae centrum ultra excurrentis ibi sub angulo recto praeruptae; postice divergenti bicorni, corniculis angularibus teretiusculis retusis margine inter utrumque corniculum obtuse bilobo, carinula transversa humillima ante sellam, papula postica obtuse triangula puberula. Lobi labelli laterales basi lata sessiles, margine antico rectiusculi, postico apicem versus dilatati, superne hinc emarginatuli, curvilinei, angulis in confiniis prope rectis; lobus medius abbreviatus excavatus, apice suo retuso trilobulus; calli loborum lateralium postici basilares carinaeformes, carinae jugum triangulum, margine superiori nunc bicrenatulum; gynostemium semiteres elongatum, pronum, facie et dorso medio puberulum; alis semiellipticis retusis brevibus, androclinio dentato. Blüthen erst grüngelb, dann goldgelb; Lippe und Säulengrund purpurfleckig. Im Garten des Hrn. Keferstein von Hrn. Lehmann cultivirt.

5. ACINETA CRYPTODONTA Rchb. fil. Bonpl. II. 92:

Aff. A. chrysanthae: sella turcica apice et postice dentata sessili, dente conico acuto sub ala sellae postica; callo infracolumnari obtuso.

Racemus abbreviatus pendulus densiflorus (17); bracteae (oblongae acutae concavae ovario pedicellato breviores) ac ovaria pedicellata microscopice nigrofurfuracea. Sepala oblonga acutiuscula, lateralia obliqua ima basi subconnata, tepala oblonga acuta basi valde angustata cuneata, obliqua. Hypochilium gracile incurvum canaliculatum addito in ima basi gynostemii confinio denticulo obtuso appresso; epichilio pseudarthrosi (immobili) quasi articulato (more A. Barkeri, sellae turcicae) trilobo lobis lateralibus magnis trapezoideis obtusangulis, basin versus angustioribus, lobo medio cuneato oblongo apice obtuse trilobo; carinula in ima basi erecta semilunari inter utriusque lobi lateralis confinia. Sella turcica sessilis elongata, dimidio anteriori apice obtuse tridentato, dentibus lateralibus extrorsis, medio retuso obsoletissime hinc quasi crenulato; carinula obliqua utrinque in marginem posticum lobi lateralis transgrediens, ante illius angulum posticum angulo obtuso desinens, dente conico elongato valido puberulo pone basin sellae in excavatione hypochilii procumbente. Gynostemium clavatum, rectum; apicem versus anguste et obtusangule alatum, margo androclinii cucullatus, minute crenulatus, tota facies antica et dorsalis valde et dense puberula. *Cycnoches Lindleyi* Hort. Säule weiss mit rothen Punkten und Flecken. Hülle braun. Im Garten des Hrn. Senator Jenisch von Hrn. Kramer cultivirt.

6. ACINETA CHRYSANTHA Lindl. Cf. Walp. Ann. III. 547. l. c. Lindl. l. c.:

Flowers size of A. Barkeri; erect racemes, bright golden flowers; racemes height a foot. Loaded closely with gold yellow blossoms, each more than 17½ lines wide, very like these of A. Barkeri exc. in colour. The lip appears to be white, column crimson. At eight the flowers are very aromatic. From other Acinetas it is distinguished by the presence of a long blunt, papillose horn arising from the hypochil. Ann. Gand. t. 282. We do not feel certain, that the erect position of the raceme is habitual with this plant, for according to the drawing, while one raceme rises upright, another is bent downwards as in Acineta.

7. ACINETA DENSA Lindl. cf. Walp. Ann. III. 546. Lindl. l. c.:

Flowers pale yellow, externally spotted with crimson, lip yellow, with deep crimson; hypochil more concave than A. Barkeri, the tooth of which is not notched at the point; an entire epichil remarkably warted at the base, and the lateral lobes of

metachil not at all rounded with the posterior angles of the internal appendage sinus and not extended into a long subulate process.

Huc: *Acineta Warscewiczii* Klotzsch Allg. Gtz. 1852. 145

Pseudobulbis ovalooblongis, compressiusculis, leviter sulcatis, apice 3—4foliatis, foliis maximis, late lanceolatis, subplicatis, utrinque attenuatis, scapo basilari pendulo multifloro, floribus carnosulis, pallide cerinis, apertis, perigonii foliolis exterioribus impunctatis, brevissime acutis, extus convexis, duobus inferioribus oblique ovatis, supremo elliptico, duobus interioribus aequilongis obovatis, obtusis, basi attenuatis, intus puberulo rubro punctatis, labello cum columna continuo, crasso, carnoso, hypochilio oblongo concavo, intus puberulo, rubro punctato, extus ad apicem umbilicato, epichilio exarticulato, tripartito, ascendente basi appendice callosa atropurpurea, 4 angulata, longitudinaliter unicostata, apice truncata, inflexa, lobis lateralibus latis, truncatis, erectis, intus rubropunctatis, intermedio aureo, obovato, plano, patenti, columna elongata subcurvata, albida dorso pilosa, intus versus basin rubro punctata, alis subangustis.

Central-America. v. Warscewicz. Mathieu.

8. ACINETA BARKERI Lindl. Bot. Reg. XXIX. (1843). Misc. 100:

Petalis sepalis aequalibus, callo labelli duplici inferiore subhastato apice tridentato basi multidentato, lacinia intermedia emarginata, lateralibus acinaciformibus, columna elongata alis angustioribus.

Mexico.

Scape long, pendulous, lax, many-flowered. Flowers yellow, whole-coloured. The lip has certainly no articulation in the middle, although from Mrs. Withers fig. in Mr. Bateman's splendid plate such would seem to be the case.

Peristeria Barkeri Bateman Orch. Mex. Guat. tab. 8:

Pseudobulbis ovatis, profunde sulcatis, 3—4 phyllis, scapis pendulis multifloris, foliis subaequalibus, floribus carnosis fere clausis, sepalis petalisque subaequalibus concavis obtusis, labelli trilobi lobis lateralibus integris erectis, intermedio angustiore basi calloso; columna aptera leviter pubescente.

Mexico: Xalapa. Ross. — Bot. Mag. 4203. — Cf. Walp. Ann. III. 547.

1425. ⅟ LYCOMORMIUM *Rchb. fil.*

v. Schl. B. Z. 1852. p. 833.

Flores postici: perigonium carnosum, externum ima basi connatum. Phyllum summum oblongum, obtusum, obtusiusculo attenuatum, concavum, lateralia externa in gynostemii pede, triangulo attenuata, gynostemium versus descendentia; lateralia interna lanceolata, apice attenuata, falcato curvata, basin labelli versus ascendentia. Labellum cum pede gynostemii continuum, nec articulatum, angulatum, cochleari-excavatum (margines laterales curvilinei) apice trilobum, lobi laterales trianguli, obtusi, erecti, lobus medius carnosissimus, triangulus, minutus, rostrato inflexus; medio profunde canaliculatus, in utroque sulci margine alte carinatus, pone carinas extrorsum sulcatus, fundo canalis nunc carinulato. Gynostemium breve, carnosissimum, dorso recurvum, ante apicem intrusum, utrinque aequaliter alato-marginatum, androclinium perpendiculare, breviter marginatum, rostellum trilobum, supra stigma lineare transversum pendulum. Anthera carnosissima, oblonga, fronte

transverse angulata, antice ligulata, biloba, magis membranacea, postice et inferne in dentem carnosum acutissimum longum geminum, antrorsum (!vestigia paginae inferioris!) excurrens. Pollinia oblonga cuneata, depressa (?), per paria incumbentia, sessilia in glandula oblonga, antice acuta biloba. Gynostemii pes angulatus cum gynostemio et cum labello canaliculatus, a labelli lobis lateralibus (Peristeriaceis) nudus.

1. **LYCOMORMIUM SQUALIDUM** Rchb. fil. l. c. (*Anguloa squalida* Endl. Pöpp. Nov. Gen. et Sp. I. 74):

Diese ist die vierte Gattung in der kleinen Gruppe der Peristerien. Sie steht Peristeria zunächst und zeichnet sich durch die mangelnde Gliederung der Lippe und die wunderbare Anthere sehr aus.

Lindl. Bot. Reg. XXX. (1844) sub 63. What Anguloa squalida of Pöppig may be, I cannot say. I have never seen the plant, and the barbarous analyses given by that author preclude all hope of coming to any conclusion about it. It may however be safely asserted, that no such plant exists, as is represented by Mr. Pöppig.

1425⁴/. LACAENA *Lindl.*

Bot. Reg. XXIX. (1843.) Misc. 101.

Perianthium carnosum, patens, sepalis subaequalibus basi subconnatis. Petala conformia minora. Labellum cum columna et in medio articulatum, hypochilio unguiculato cuneato bilobo apice pulvinato, epichilio integro. Columna erecta semiteres. Pollinia 2, postice fissa, caudicula setacea, glandula minuta.

Herba Peristeriae habitu.

Bot. Reg. XXX. 1844. 50: Lacaena was one of the names of Helen, and may be applied to this plant because of its beauty; but it may also be derived from Λαχη, a cleft, in allusion to the divisions of its lip.

1. **LACAENA BICOLOR** Lindl. Bot. Reg. XXIX. (1843) sub Misc. 101:

Guatemala. — Racemes long, drooping. Flowers pale yellow, with the lip spotted with dark purple. — Bot. Reg. XXX. 50: This fine plant was sent to the Horticultural Society from Guatemala by Mr. Hartweg, who found it in the mountains of Salama, in the province of Vera Paz, also near the village of Sunil, near Quetzaltenango in Guatemala, growing on rocks, at an elevation of about 7000' above the sea.

Huc: *Peristeria longiscapa* Rich. et Gal. tab. 30. Annales sc. nat. 1845. Janv. p. 23.

Pseudobulbis ovoideis obtuse costatis 2phyllis; foliis maximis elliptico-lanceolatis, scapo radicali dependente; floribus parvulis luteolis, labello violaceo unguiculato trilobo. Mexico.

2. **LACAENA SPECTABILIS** Rchb. fil. Bonpl. II. 92:

Affinis L. bicolori. Labello angustiori basi melius et anguste unguiculato, lobo medio anguste unguiculato pandurato acuto, callo inter lobos laterales cylindraceoconico basi antice foveolato minute velutino; perigonio lilacino.

Ovarium et sepala externe minute muriculata. Sepala oblonga obtuse acuta. Tepala oblonga utrinque basin versus obtusangula, hinc cuneata. Labellum exactissime typum illius L. bicoloris refert: basi unguiculatum, dein trilobum, lobis obtusangulis erectis, auricula utrinque minuta obtusa erecta ante unguem (quae in L. bicolori reperitur!); cornu supra descriptum a carina disci ascendens; lobus medius superne minute punctulato velutinus. Gynostemium a lateribus paulo compressum et androclinium bene marginatum.

Huc: *Nauenia* Klotzsch in Otto und Dietrich Allg. Gtz. 1853. 193:

Perianthium galeatum apertum, foliolis tribus exterioribus ima basi connatis. Phyllum summum oblongum acutum concavum apice recurvum; lateralia interiora minora obliqua gynostemii pede inserta. Labellum cum pede gynostemii continuum articulatum patens trilobum; hypochilio oblongo versus apicem bilobo (lobis rotundatis erectis), processu galeato antice excavato interjecto; metachilio nullo; epichilio subquadrato, basi dilatato truncato, longiuscule unguiculato cum hypochilio continuo. Columna arcuata, semiteres, alato-marginata, labello paulo brevior. Anthera bilocularis depressa. Pollinia 2, postice fissa, caudicula lineari in glandulam strictam acutam elongata.

Herba epiphyta pseudo-bulbosa centro-americana facie Lacaenae. Pseudo-bulbi majores elongati costati apice attenuati 2—3 foliati. Scapi radicales longissimi penduli multiflori minutissime atro-punctati. Flores speciosi dilute lilacini intus minutissime violaceo-punctulati. Columna albida basi viridis. Epichilium minutissime atro-purpureo punctatum.

Nauenia spectabilis Klotzsch l. c.:

Pseudo-bulbis elongatis obpyriformibus 8—10 costatis 2—3 foliatis; foliis robustis atro-viridibus anguste oblongis nervosis utrinque attenuatis, versus basin distanter fusco arido vaginato-bracteatis; bracteis floralibus sessilibus ovato-lanceolatis concavis coloratis germine subduplo brevioribus; floribus magnitudine florum Lacaenae bicoloris.

1425 ^{b}/. KEGELIA *Rchb. fil.*

v. Schl. B. Z. 1852. 660.

Perigonii phylla 5 lanceolata, acuminata. Labellum unguiculatum, trilobum, medio calloso-cristatum. Gynostemium apus (sc. non productum). Macradeniae affine visum gynostemii fabrica longissime distat. Et valde mirum, quod insolito inter Vandeas more perigonia externa extus, pedunculum, vaginas, ovaria papillis filiformibus acutis atrofuscis vestita gerit.

Dicavi amicissimo Kegel, hortulano universitatis Halensis speciemque inscripsi hortulano meritissimo Van Houtte, ut mira ac elegans haec plantula combinata gereret nomina virorum, qui concordia ac amicitia juncti quam maxime et de hortis et de botanica arte meruerunt.

1. KEGELIA HOUTTEANA Rchb. fil. l. c.:

Ich sah eine einzige Aehre mit vier Blüthen, welche denen der *Cirrhaea Loddigesii* gleich gross sind. Der Blüthenstiel scheint hängend gewesen zu sein. Die Deckblätter trockenhäutig, länglich, spitz, so lang wie die Fruchtknoten. Die äusseren Hüllblätter länglich ; allmählich zugespitzt, wohl olivengrün, die inneren von keilförmigem Grunde ausgebreitet, dann zugespitzt, weiss, mit 2—3 Purpurflecken. Der Nagel der Lippe gekielt in der Mitte. Die seitlichen Lappen ziemlich rautenförmig, der mittlere ziemlich dreieckig, mit stumpfen Seitenwinkeln, in der Mitte nur verbunden mit den Seitenlappen, zwischen denen eine aufrechte, schief rautenförmige oberwärts gefurchte, schmale, nur am unteren Grunde angewachsene Leiste; weiss. Säule länger als Lippe, unten schlank, nach oben stärker. — Vom Herrn Universitätsgärtner Kegel in Surinam entdeckt. Blühte bei Hrn. Van Houtte.

Die auf *Melampodium? ruderale* begründete Kegelia ist leider zu Unxia zurückgeführt worden. (Miquel in Haarlem naturhist. Verhandl.) Xenia Orchid. p. 45. Tab. 25. I. 1—7.

1425⁶/. SCHLIMIA *Planch. Lind.*

(Lind. Cat. 1852.) — Paxt. Fl. G. III. 115. N. 581.

Sepala carnosa inaequalia, dorsale lineare, rectum, liberum, lateralia maxima in saccum altum omnino connata. Petala sepalo dorsali aequalia, reflexa. Labellum minutum, ungue carnoso cum pede columnae articulato tuberculato, limbo simplici membranaceo duplo breviore. Columna semiteres, apice utrinque auriculata, in pedem cum sepalis lateralibus connatum producta, rostello setaceo deflexo. Pollinia 2, cereacea, caudicula elongata cuneata, glandula minuta lunata.

Lip is a fleshy body, shorter than the column, and articulated with it, with three knobs near the foot of the column, another in the middle of its length, and a fourth which is concave at its extremity, which is prolonged into a thin trowelshaped limb.

1. SCHLIMIA JASMINODORA Planch. Lind. l. c. c. xyl. 287:

Genre nouveau des plus curieux, à sépales inférieurs soudés ensemble et formant un sac resemblant à ceux des Cypripedium. L'espèce en question porte une hampe inclinée de huit, à dix pouces, garnie de 10—15 fleurs d'un blanc pur, à odeur du jasmin fortement prononcé. Elle croit épiphyte et terrestre dans les forêsts de la province d'Ocanna où elle á été découverte par M. Schlim.

Rchb. fil. Bonpl. II. 281. Ocanna. 6—7000'. Mai. Nr. 773.* Schlim.

2. SCHLIMIA ALPINA Rchb. fil. Warscew. Bonpl. II. 98:

Labelli lamina callo suo plus duplo longiori pandurato acuto (nec aequilongo triangulo); gynostemii alis dolabriformibus (nec triangulis), callo infracolumnari quinquelobo regulari (nec gyroso lobulato incrassato); anthera apice bidentata (nec retusa). Racemus multiflorus pendulus; bracteae obtuse acutiusculae ovaria pedicellata dimidio aequantes, sepalum summum oblongum acutiusculum cuneatum, sepala lateralia in saccum amplum medio ostio acutiusculum connata, tepala linearia apicem versus dilatata acuta, labellum cum ima basi pedis producti gynostemii continuum, linea curva ascendens, bipartitum, hypochilium corneum quinquelobum, lobi laterales ligulati abbreviati antrorsi, lobus medius cyathiformis, margine lobulato; epichilium panduratum acutum membranaceum; gynostemii pars superior brevis, utrinque dolabriformi alata, androclinium in rostellum longum lineare apiculatum deflexum productum, fovea stigmatica ovalis sub processu rostellari; in pede gynostemii tuberculum cum tuberculis utrinque duobus lateralibus, more Acinetae.

Blüthen schwefelgelb mit rothen Punkten innerlich, um mehr als ein Drittheil grösser, als die der *Schlimia jasminodora* Linden Planchon, einer verbreiteten Gartenpflanze. — Schlimia ist eben so wenig eine Cryptochilea, als die Cryptochileae Vandeae. — Wir halten Schlimia für eine noch ganz vereinzelte Form. Zu entdeckende Mittelglieder werden höchst wahrscheinlich den Uebergang zu den Peristeriaceae vermitteln. — Neu-Granada. 9—10,000'. v. Warscewicz.

1425⁷/. PAPHINIA *Lindl.*

Bot. Reg. XXIX. (1843). p. 14.

Flores subregulares, expansi petaloidei, parum in mentum producti. Labellum parvum, unguiculatum, tripartitum, glandulis filiformibus apice oblique obsitum. Columna clavata, elongata, semiteres, apice auriculata. Pollinia 4, per paria caudiculae elongatae apice setaceae affixa, glandula

minute subtriangulari; rostello subulato. — Herba pseudobulbosa, scapo pendulo paucifloro.

1. PAPHINIA CRISTATA Lindl. l. c. *Maxillaria cristata* Lindl. in Bot. Reg. XXI. (1836). 1811:

Flores pulcherrimi extus albi, intus purpureo interrupte fasciati; petalis apice omnino purpureis. — Trinidad and Guayana. — Bot. Mag. 4836. — V. H. Flore des Serres IV. 338.

1425ᵃ/. HOULLETIA *A. Brogn.*

Ann. Sc. nat. sec. Ser. XV. 1841. 36. — Bot. Reg. XXVI. (1841.) Misc. 99:

Perianthium membranaceum patens (non reflexum). Sepala concava, libera, inferioribus vix basi columnae connatis. Petala basi angustata, unguiculata, apice rotundata. Labellum cum basi incurvata columnae articulatum liberum carnosum, medio constrictum, articulatum, parte basilari (hypochilio) oblonga plana, lobis seu processubus lateralibus membranaceis angustis retrorsum arcuatis corniformibus, parte apicilari (epichilio) infra basilarem articulata integra. — Columna perianthio brevior arcuata semiteres, antice plana, vix superne alato-marginata. Stigma transverse excavatum. Anthera opercularis depressa; pollinia duo oblonga angusta, externe sulcata, caudicula membranacea oblonga basi connata, glandula angusta lanceolata.

Epiphyta, pseudobulbis ovato conicis, monophyllis, foliis longissime petiolatis, plicatis, membranaceis, scapo radicali ascendente, floribus racemosis nutantibus, ovario plus minusve contorto, perianthio membranaceo pallide maculato, fragrante, labello carnoso maculis atro-violaceis insperso, levem odorem stercoreum olente.

Mr. A. Brogniart considers it near Stanhopea from which it differs in its sepals not being reflexed, its lip articulated in the middle, the lower half bearing two membranous horns directed backwards and upwards towards the column, by the column being short and not membranous at the edge, by the petals having a stalk, by the lanceolate form of the gland of the pollenmasses, and by the flowering stem being erect, not pendulous. Upon considering these characters it is evident that Houlletia is either the same as Maxillaria? Brocklehurstiana, already mentioned in this vol. p. 10. n. 28, or a plant very nearly related to it. As the genus is no doubt a good one, it will be necessary to change the name of my species to Houlletia Brocklehurstiana.

Sert. 43: Perianthium patens, sepalis subliberis, petalis paulo minoribus unguiculatis. Labellum basi columnae continuum, patens; hypochilio angusto, basi excavato, quasi bilabiato, apice utrinque in laciniam producto, lobulo nano interjecto; metachilio nullo; epichilio angulari dilatato cum hypochilio articulato. Columna erecta, arcuata, clavata, semiteres, labello paulo brevior. Anthera bilocularis depressa. Pollinia 2, postice fissa, caudicula lineari-lanceolata in glandulam acutam elongata nec infixa. — Herbae epiphytae, pseudobulbosae, Americae aequinoctialis, foliis solitariis plicatis. Scapi radicales, erecti, apice racemosi. Flores speciosi, luteo-fusci; bracteis parvis nec spathaceis.

a. Pedunculus erectus.

1. HOULLETIA BROCKLEHURSTIANA Lindl. Bot. Reg. XXVII. (1841.) Misc. 99. Huc *Maxillaria? Brocklehurstiana* Lindl. Bot. Reg. l. c. p. 10. Misc. 28:

Foliis solitariis oblongo-lanceolatis longipetiolatis plicatis scapo multifloro brevioribus, sepalis patentibus oblongis, inferioribus paulo connatis, apice rotundatis, petalis angustioribus basi angustatis, labello membra-

naceo tripartito: laciniis lateralibus linearibus acuminatis reflexis, intermedia ovato-triangulari subhastata, columna basi infundibulari depressa.

Charming! Imp. from Rio Janeiro by T. Brocklehurst Esq. of the Fence near Macklesfield. It has a scape a foot and a half high, terminated by several rich cinnamon — brown spotted flowers, more than 2″ diam. and deliciously sweet. It has the habit of M. Warreana and is one of the finest species of the genus. It may indeed be doubted, whether it really belongs to Maxillaria and characters may doubtless be found to separate it. I am however averse to making genera in the Maxillardious group of Vandeae, until a larger number shall have been examined in a living state.

Lindl. Sert. 48:

„Hypochilii laciniis lineari-lanceolatis reflexis, epichilio ovato-triangulari subhastato angulis lateralibus acuminatis.

Near Stanhopea, but hypochil is not concave, on the contrary it is flat, with a funnel-shaped hollow at its base. Flowers 3½″ diam., spread out so as to form a somewhat concave perianth richly spotted with brown upon a cinnamon-coloured ground. In texture they are leathery and firm. Sepals oblong, rather obtuse; lateral being very slightly united at the base and somewhat larger than that at the back. Petals rather shorter, much narrower, obovate and narrowed at the base into a clew. Lip consists of a hypochil or lower and an epichile or upper half, with no intervening portion; it is continuous with the base of the column and rather shorter than lateral sepals. Hypochil is narrow, flat, spotted with brown, hollowed out next the foot of the column into a kind of 2 lipped funnel, from its anterior end spring 2 long, linear lanceolate taper pointed appendages, which turn back towards the column, reaching almost half way up it, just at the junction of the hypochil and epichil, and between those appendages is a minute reflexed fleshy tooth, such as is found in the same situation in Stanhopea. Epichil is broader than the last, with which it is articulated; in colour it is a deep rich violet, in form somewhat triangular with curved sides and at the lower angles it is extended into a very narrow acuminate appendage, so that upon the whole it has sometimes the form technically called hastate. Column curved, rounded at the back, slightly concave, in front thicker at the upper, than the lower end. Pollenmasses deeply 2 lobed at the back, planted on the end of a long narrow caudicula, which runs into an acute gland in such a manner, that the 2 are completely blended together." — *Houlletia stapeliaeflora* Brogn. — Pescatorea 34. — B. Mag. 4072.

2. HOULLETIA PICTA Lind. und Rchb. fil. in Regel Gartenflora 1855. 2:

Affinis H. Brocklehurstianae Lindl. (stapelioidi Brogn.) paulo minor, epichilii semiovati acutiusculi angulis posticis retrorsis subfalcatis, hypochilii callo in foveam transversam utrinque acutam marginatam exeunte, dente introrso medio antico, cornubus haud supra apicem hypochilii coalitis (more H. odoratissimae Linden).

Blüthenhülle schön rothbraun mit ungleichen Schattirungen. Lippe weisslich mit etwas violetter Säule, stärker hautflüglig, als bei der gemeinen H. Brocklehurstiana. Es ist sonderbar, dass diese Art völlig geruchlos scheint, während jene Art und H. odoratissima, welche beiden ein Mittelglied bildet, stark riechen. Erstre hat täuschenden Geruch von Zimmt und Gewürznelken. — Neu-Granada; von Schlim entdeckt.

3. HOULLETIA ODORATISSIMA Linden Paxt. Fl. G. III. 172:

Scapo stricto, sepalis liberis, petalis conformibus indivisis, labelli epichilio unguiculato ovato obtuso subsagittato undique intra marginem verrucoso angulis posticis obtusis, mesochilio dente longo linguiformi apice acuto, cirrhis ascendentibus falcatis columna brevioribus, hypochilio appendice pedicellata cyathiformi aucto.

Ocanna. Neu-Granada. Schlim. Mai 1851, on the borders of rivulets. Its extremely aromatic odour discovered its presence at a considerable distance, on which

account Mr. Linden calls it H. odoratissima. The pseudobulbs are described as resembling those of the Brazilian Houlletia, but being more blunt. The flowers are brick-red, both the lip and column white.

Pescatorea t. 3. — Rchb. fil. Bonpl. II. 281. — Ocanna. 4—5000'. Jull. Nr. 37. Schl.

b. Pedunculus pendulus.

4. HOULLETIA TIGRINA Linden. Lindl. in Paxt. Fl. G. III. 172:

Scapo decurvo, sepalis alte connatis, petalis acutissime trilobis, labelli epichilio sessili ovato obtuso apiculato, hastato, versus basin verrucoso angulis posticis acuminatis, mesochilio apice carnoso in tuberculum infundibulare elevato cirrhis ascendentibus falcatis columna brevioribus, hypochilio carnosissimo basi excavato semibiloculari.

Wild on the ground in New-Granada, in the province of Ocanna, growing in forests of Weinmannia, where it was found by Mr. Schlim, one of Mr. Linden's collectors, im June and July, 1851, at an elevation of 4800 feet. — The leaves are broad, plaited, erect, almost two feet long, and look like those of a vigorous Stanhopea. The stem appears to be about as thick as a swans quill, greenish red, slightly dotted with brown. The flowers are four inches in diameter, and of the firm texture of Stanhopeas. The sepals are oblong, concave, straw-colour, very richly mottled and variegated with deep rose. The petals are one inch and three-quarters long, very acute, with a strong sharp-pointed lobe on each side, brilliant yellow variegated with rich crimson in the same way as the blade; the latter is yellowish at the point, otherwise whitish speckled all over with crimson; the stalk is richly marked with cross bands of blood-red, and has on either side a process shaped like a scythe blade which rises up in the direction of the anther. The column is dull yellow speckled with purple. After such an account it is only necessary to say, that Mr. Linden has this noble plant on sale, and that the character of Houlletia as a genus distinct from Stanhopea is placed in jeopardy.

5. HOULLETIA LANSBERGII Lind. Rchb. fil. in Regel Gartenflora 1855. p. 2:

Aff. H. pictae Linden, biflora, sepalis angustioribus, tepalis cuneato oblongis, margine superiori prope medio acutangulo.

Diese Art ist eine fast ebenbürtige Schwester der prächtigen *H. picta* Lind. (*Paphinia picta* Lind.), deren Bild für die Pescatorea vollendet vorliegt. Sie zeichnet sich aus durch oben mehr eingeschnürte kurze Pseudobulben. Hängend wie bei jener erscheint der dreischeidige Blüthenstiel mit seinen zwei wunderbaren Blüthen, die sich jedoch nie gänzlich zu öffnen scheinen. Drr Grundton der Sepalen und Tepalen ist ein helles Gelb mit röthlichen Tinten. Zahlreiche lackfarbige Pantherflecken sind über sie ausgegossen, hellere innerseits der Sepalen, dunklere auf den Tepalen, ganz besonders auf dem Unterrande derselben. Die Hinterlippe bildet eine längliche aufsteigende Schwiele, welche am Ende eine längliche Höhlung besitzt. Nach vorn flacht sie sich in eine zweilippige Spitze aus, welche dem Grunde der Vorderlippe aufliegt, die sichelförmigen seitlichen Hörner treten auch hier nicht zusammen, die Vorderlippe selbst ist streng spiessförmig, vorn stumpf. Ihre Scheibenfläche ist mit zahlreichen Runzeln besetzt. Die Hauptfarbe dieses Organs ist weiss, das Vorderstück gelblich, zahlreiche Purpurflecken erhöhen ihre Schönheit. Säule weisslich mit hellbraunen Flecken; ziemlich lang für eine Houlletia.

Rchb. fil. Bonpl. II. 19. *Houlletia tigrina* Linden? Die Pflanze stimmt völlig in allen Einzelheiten, nur sind zwei Dinge zu erwähnen, die Tepala tragen auf dem Oberrande zwar einen dreieckigen sehr fein gespitzten Lappen gegen den Grund, allein der Unterrand ist ganz unversehrt. Ferner erwähnt Herr Prof. Lindley nicht, dass jenes Stück des Hypochiliums, welches vertieft und durch eine von hinten nach vorn gehende Längenleiste halb getheilt ist, nach dem Fusse der Lippe zu jäh abstürzt (postice abrupte deci...) Jedenfalls erhalte ich die authentische Pflanze aus

einem unserer Gärten baldigst und werde dann meine Zweifel gelöst sehen. Cumana. 4000'. October. Wagener.

1425/q. POLYCYCNIS *Rchb. fil.*

(Pescatorea obiter). Bonpl. III. 218.

Genus valde affine Gongorae: sepalo dorsali libero, et labelli explanati hypochilio in epichilium imposito. Sepala lanceolata. Tepala linearilanceolata; omnia liberrima. Labellum unguiculatum medio carinatum. Gynostemium gracillimum arcuatum apice dilatatum circa foveam minutam ampliatum. Rostelli processus medius quadratulus apice bidentatus. Pollinia linearia in caudicula lineari pandurata. Habitus Gongorae. — Genus ab amico cl. Wendland fil. feliciter auguratum.

1. POLYCYCNIS MUSCIFERA Rchb. fil. l. c. (*Cycnoches musciferum* Lindl. Paxt. Flow. G. III. 29):

Ungue basi bifalcato, epichilio utrinque acutangulo medio antice acuto. Ovarium velutinum.

Neu-Granada Lansberg Ic.! Warscewicz!

Huc: *Cycnoches musciferum* Lindl. Paxt. Fl. G. III. 28. n. 500 c. xyl. 248:

Racemo laxo stricto, bracteis subulatis, sepalis linearilanceolatis acutis, dorsali refracto, petalis linearibus, labello membranaceo hastato; laciniis lateralibus ascendentibus intermedia basi rhombea saccata in apicem linguiformem attenuata. Columbia.

2. POLYCYCNIS BARBATA (*C. barbatum* Lindl. Hort. Soc. B. M. 4479) Rchb. fil. l. c. (ungue basi mutico?):

Epichilio utrinque obtusangulo, antice mutico.

Lindl. Hort. Soc. Journ. IV. 268. 1849:

Racemo ascendente longissimo (bipedali) multifloro (50—80), labelli trilobi basi barbati laciniis lateralibus erectis triangularibus acuminatis inaequilateris, intermedia rhombeolanceolata acuminata, ovario hirsuto.

Neu-Granada. Linden. Pseudobulbs of Gongora. Flowers soft delicate flesh colour spotted with deeper red. Whole of parts are so thin, as almost to deserve the name of membranous and in the middle of the threelobed stalked lip is a broad tuft of long half-transparent hairs.

Hook. B. M. 4479:

Pseudobulbo ovato compresso demum nudo apice folioso, folio solitario elliptico oblongo utrinque attenuato plicato, racemo radicali longe pedunculato, pedunculo ovariisque pilosis, sepalis petalisque conformibus lanceolatis patentissimis, labelli facie superiore barbata, hypochilio alto lato, epichilio cordato-ovato obscure trilobo subreflexo. Costa-Rica.

Lindl. Paxt. Fl. I. p. 45: A singular and handsome plant, which appears to connect Gongora with this sportive genus. A young plant scarcely exhibits a pseudobulb at all, only several imbricating leafy scales terminated by an oblong-oval, acuminated plaited leaf. When this leaf is fully developed, the almost naked pseudobulbs appear ovate, compressed, green, smooth, with the withered scales at the base. Scape from the base of the pseudobulb, a foot long, dark purple pubescent, pointed, sheathed with scales at all joints; this is terminated by a drooping many flowered raceme, a foot long, of which the rhachis and pedicel — like ovaries are dark purple, hairy. Flowers modically large, at first sight a good deal of Gongora maculata. Costa-Rica.

3. POLYCYNIS VITTATA Rchb. fil. Mss. *Houlletia vittata* Lindl. B. Reg. XXVII. 1841. Misc. 100. tab. 69:

Sepalis linearibus acutis, petalis lineari-lanceolatis basi tortis, hypochilii lobis ovatis obtusis rectis, epichilio rhombeo apice rotundato angulis lateralibus acutis.

Lodd. rec. by Schomburgk. It has the erect raceme of Houlletia Brocklehurstiana, but the flowers are much smaller, form a pyramidal mass, and are yellow, streaked

with so much deep chocolate, that the former is hardly seen except on the lip. From the similarity in habit between these plants and Maxillaria Warreana one would have thought, they must belong to the same genus. I cannot, however, find any combining character, and their differences are very numerous.

Lindley in London Journ. II, p. 672: Acaray mountains: British Guiana. Schomburgk.

1426. EUCNEMIS *Lindl. Orch.* 161.

= *Govenia* Lindl.

Ad 1427. LUISIA *Gaudich.*

Gaudich. in Freycinets Voyage p. 426. (1826.) Blume Rumphia IV. 50. Mus. I. 63. Walp. Ann. III. 548. — Lindley Folia I. impressa April 20. 1853.

Sepala herbacea, linearia, lateralibus labello suppositis, dorsali minore. Petala dissimilia, tenuiora, saepius longiora, patentissima vel fornicata. Labellum indivisum, saepius auriculatum, cum columna continuum, dependens, inappendiculatum, nunc convexum, nunc concavum et medio constrictum. Columna nana, carnosa, apoda. Stigma anticum, circulare; rostello obtuso obsoleto. Pollinia 2, cereacea, postice excavata; caudicula lata, brevi triangulari; glandula membranacea replicata. Anthera subrotunda, 2-locularis; valvulis macilentis.

Herbae epiphytae, caulescentes, erectae, junceae, Asiae et Americae tropicae. Folia teretia, rigida. Flores parvi, obscure virides vel purpurascentes.

A genus of inconspicuous, taper-leaved, rushy plants, with dingy green or purplish or yellowish flowers. The species differ greatly in the form of the lip and the proportions of the sepals and petals. They are not of the least interest to cultivators; the most remarkable is L. volucris, found in Khasia by Mr. T. Lobb, which does not appear to have been gathered by any other traveller.

A species occurs on rocks on Mount Victoria in Hong Kong, where it was found by Major Champion (herb. Chamb. 526); but it was not seen in flower and cannot be identified. It may possibly be L. teres.

1. LUISIA VOLUCRIS Lindl. l. c. sub 1

L. spicis brevissimis paucifloris, sepalo dorsali recto lineari cucullato, petalis fere triplo longioribus patentissimis linearibus subspathulatis, labello biauriculato lamina cordata oblonga convexa.

Wild in Khasia.—T. Lobb. (v. s. sp. comm. am. Veitch.)

Much the most striking of the genus. The flowers look like little birds with narrow outspread wings, or petals. They are nearly two and half inches from tip to tip.

2. LUISIA PSYCHE Rchb. fil. in v. Schl. B. Z. 1863. p. 98.

3. LUISIA ANTENNIFERA Blume Museum 64. Lindl. l. c. sub 2:

L. spicis multifloris, sepalis oblongis lateralibus margine reflexis, dorsali cucullato, petalis angustissimis elongatis apice subincrassatis, labello biauriculato ovato obtuso ad callosum apicem margine revoluto.

Wild in Borneo: on trees near Martapura-Blume.

4. LUISIA TENUIFOLIA Blume Museum 64. Lindl. l. c. sub 3:

L. petalis sepalo dorsali duplo longioribus, sepalis lateralibus sub apice mucronulatis, labello oblongo biauri convexo, trisulcato apice tenui bilobo.

Tsierou-mau-maravara. Rheede XII. t. 5.
Cymbidium tenuifolium. LO., 167.
Birchea teretifolia. A. Rich. Ann. Sc. 1841. t. 10.
Luisia Birchea. Blume l. c.

Wild in Ceylon—Macrae; Nilgherry mountains—Hooker; Malabar—Rheede; Khasia Lobb. (v. s. sp.)

Sepals and petals yellowish green. Lip pale green, painted with purple, and bearing some resemblance to an Ophrys.

Huc?: *Birchea* A. Rich. in Ann. sc. nat. 1841. N. S. XV. p. 66:

Calyx subringens, sepala externa libera subaequalia, linearia, interna paulo longiora, labellum sessile, carnosum, ecalcaratum, oblongum, superne canaliculatum apice bifidum. Columna brevis aptera. Pollinia 2, integra, lamina pellucida lata, apice superne replicata et altera lamina glandulosa ovali angulatim terminata insidentia.

Herba epiphyta. Caulis teres, foliosus. Folia teretia, carnosa, basi vaginantia, decidua. Flores albi in spicam oppositifoliam, brevem, paucifloram dispositi.

Ex tab. analytica Lindl. est Adenoncos Blume. Sed differt ab Adenonco petalis majoribus, polliniis 2, appendice stigmatica caudiculam terminante, lateri affixa.

Dr. Birch med en chef à la résidence d'Utacamund aux Nilgherries.

Birchea teretifolia AR. l. c. tab. 10. Radix parasitica, fibris crassis, longis, teretibus, glabris, simplicibusque constans. Caules plures ex eadem radice, teretes, graciles, simplices, pedales et ultra, foliis aut vaginis foliorum elapsorum persistentibus omnino vestiti. Folia alterna approximata, basi vaginantia, teretia, carnosa, 3—5" longa, apice acuta, superne sulco longitudinali notata, diametro ne sesquilineam lata, decidua. Vaginae tubulosae, caulem amplectentes, subatriatae, persistentes. Flores albi, spicam e vagina folii erumpentem, oppositifoliam 3—5 floram, brevissimam efformantes. Rhachis crassa, brevis, vix semiunciam longa. Bracteae ad basin singulorum florum subsessilium parvulae, squamaeformes, subconcavae, crassae, subovales, acutiusculae, persistentes. Calycis sepala externa erecta, aequalia, lanceolato-sublinearia, obtusa; duo interiora lateralia paulisper longiora, lineari obtusa, subtrinervia, omnia libera. Labellum sepalorum interiorum longitudine, oblongum subangustum, plano-subcanaliculatum, basi vix biauriculatum, sessile, apice bifidum, lobis obtusis margine subsinuosis. Columna brevis, aptera, apice antice subbiloba, stigma crassum faciem anticam subconcavam columnae occupans. Anthera terminalis operculiformis, postice obtuse et appendice subcristaeformi obtusa notata, antice plana, subtransversalis, et appendici stigmatico-glandulosae (stigma superanti) applicata. Pollinia 2 subovoideo-globosa integra, insidentia in lamina (caudicula) membranacea, tenera, translucida, e duabus partibus constanti, una plana, ovali, horizontali, basi superne replicata et alteram paulo minorem, superne glandulosam et appendicem stigmaticam efformantem gerenti. — In vallibus calidis sylvaticis circa Avalanchy. Nilgh. Perottet.

Obs. Haec addidi praesipue cum plantam et flore albo, et labello angustissimo forsan specie a Louisia tenuifolia recedere putem. Rchb. fil.

Wight Ic. pl. Ind. Or. III. n. 911. (1844): *Cymbidium triste* W. difficult to dry. Hence Dr. Lindley seems imperfectly acquainted with it having only had a bad worm — eaten specimen to examine. I cannot however understand on what principle the racemes of this and one or two allied species are called umbels. They are short, but distinctly racemose. Another peculiarity of some species of the section of this genus to which this belongs is the form of the lip, a hollow inflated sack. — Serius a cl. Wight pro Cymbidio tenuifolio declaratur. Ic. V. (1851). 911. *Cymbidium tenuifolium* W. *Cymbidium triste* R. W. Ic.: leaves subcylindrical (terete), umbels subsessile, sepals linear-obtuse, spreading, mucronate below the point; shorter than the oblong, linear, obtuse, subfalcate petals and lip; lip oblong, concave, with three callosities on the disk, auricles at the base, membranaceous, twolobed at the base, sepals yellowish green, lip purple, streaked with paler lines. Branches of trees. Eastern slopes of Neilgherries and Iyamally Hills. July — October.

5. LUISIA TRICHORRHIZA Blume Mus. 63. Lindl. l. c. sub 4:

L. racemo paucifloro, petalis sepalo dorsali parum longioribus, sepalis lateralibus alte carinatis, labello convexo oblongo rotundato basi biauri supra basin interrupto, radicibus junioribus pubescentibus.

Vanda? trichorrhiza. Hook. Exot. Bot. t. 72.
Cymbidium triste. Hooker, in Bot. Mag. t. 3648.

Wild in Khasia, at the base—J. D. Hooker and T. Thomson; hot valleys of Sikkim J. D. Hooker; Nilgherry mountains Hooker (v. s. sp.)

This is the stoutest and stiffest of the genus, sometimes with an enormous development of downy roots. Flowers dull dirty purple, or (as in B. M. 3648) with white sepals and petals.

Obs. Moneo, hanc apud ill. Lindley horribilem esse farraginem. Nam tres combinat species. *Cymbidium triste* Hook. B. M. 3648. est *Luisia platyglossa* Rchb. fil. Planta ex Nilgherry mountains Hooker (ipsissimam habeo a cl. Lindleyo trichorrhizam signatam) est eadem, quae Wight Ic. 1689, quam Lindley sub L. brachystachyde citat inter icones, dum locum inter loca non receperit. Eandem habeo ab amic. Wight.
Rchb. fil.

6. LUISIA TERETIFOLIA Gaudich. Freyc. Voy. 426. t. 37. Blume Rumphia IV. 50. t. 194. f. 3. t. 197. D. Museum 63. Lindl. l. c. sub 5:

L. spicis multifloris, sepalis oblongo-ovatis acutis, petalis paulo longioribus linearibus obtusis, labello auriculato constricto lamina oblonga concava 3-callosa.

Epidendrum triste Forster prodr. n. 314.

Wild in the Malay Archipelago—Blume; New-Caledonia—Forster.

I have not seen this plant. According to Blume the flowers are greenish yellow, with a dark purple lip bordered with yellow.

Obs. Moneo, hic iterum ill. Lindley in errorem incidisse licet ab ill. Blume deceptum. Labellum enim iconis Gaudichaudianae exacte omnino recedit ab illo Blumeanae. Gaudichaudiana habet abbreviata, Blumeana elongata labella.

7. LUISIA CONFUSA Rchb. fil. = Luisia teretifolia Blume Rumphia cf. supra:

Tepalis sepala excedentibus apice dilatatis lobulatis, labello pandurato acuto, laciniis posticis triangulis, antica oblongo triangula.

Amboyna Zippel.

8. LUISIA TERES Blume Museum 64. Lindl. l. c. sub 6:

L. spicis paucifloris, sepalis lateralibus angustioribus carinatis, dorsali et petalis subaequalibus, labello biauriculato oblongo sulcato apice bifido c. mucrone intermedio.

Epidendrum teres Thunb. Fl. Jap. p. 30; Ic. Pl. Jap. decas 1.

Wild in Japan-Thunberg.

9. LUISIA ZEYLANICA Lindl. l. c. 7:

L. spicis sessilibus nanis, sepalo dorsali petalis acuminatis obtusis multo breviore, labello concavo oblongo laevi medio constricto.

Cymbidium triste Hort. Angl.

Wild in Ceylon—Macrae (v. s. sp. et v. c.)
Flowers dull green with a dull violet lip.

10. LUISIA VALIDA Rchb. fil. in Bonpl. X. 1862. 335.

11. LUISIA BURMANICA Lindl. l. c. sub 8:

L. spicis brevissimis, sepalis petalisque inflexis acuminatis, labelli inauriculati ungue lato sulcato lamina ovata cordata acuta papillosa.

Cymbidium triste Griffith Notul 340 in part.

Wild in Burma; near Mergui—Griffith (v. ic. pict. beat. inventoris.)

I only know this from a sketch by Griffith. It has the habit of L. tenuifolia, but the flowers are totally different. They are greenish daggled with red, and the lip is black purple with green stains inside the edge.

12. LUISIA UNIFLORA Blume Museum 64. Lindl. l. c. sub 9:

L. floribus solitariis longe pedunculatis, petalis sepalis aequalibus, sed triplo angustioribus, labello concavo medio constricto dimidiae inferioris venis rectis elevatis superioris ovatae medio calloso.

Mesoclastes uniflora LO., 45.

Wild in Nepal; Gossain Than—Wallich (v. s. sp.)

Entirely different from L. tenuifolia, to which Blume suggests, that it may be referred.

Obs. Ill. Lindley falsissime citat „Blume Rumphia 64."

13. LUISIA BRACHYSTACHYS Blume Rumphia 61. Lindl. l. c. (sub 10):

L. racemis sessilibus, sepalis petalisque subaequalibus, labello concavo medio constricto apice ovato sulcato.

Mesoclastes brachystachys LO. 45.

Cymbidium triste Roxb. Fl. Ind. III. 461. Wight Ic. t. 1689.

Wild in Continental-India; Delta of the Ganges, common—Roxburgh; Silhet—Wallich; Khasia—Lobb; Java and Borneo—Blume (v. s. sp.)

Flowers pale pink-Wight; yellowish —Blume: greenish yellow, lip dark purple with a few yellowish spots—Roxburgh.)

Obs. Haec est sincera farrago ex duabus sequentibus. Rchb. fil.

13. LUISIA ZOLLINGERI Rchb. fil. Mss.: *Luisia brachystachys* Bl. quoad loca moluccana, Lindl. idem. Rchb. fil. Xenia I. 78. t. 1—3.

14. LUISIA BRACHYSTACHYS Rchb. fil. Mss. *Mesoclastes brachystachys* LO. 45. Huc: *Cymbidium triste* Wild (not R. W. Ic. 911). Wight Ic. 1689:

Leaves (subcylindrical), umbels subsessile; sepals and petals connivent, fleshy oblong, boat shaped, lip oblong, twice the breadth of the sepals. — Flowers pale pink, lip at first conformable, afterwards lila. Jyamally Hills. Sept. Oct. Wight.

15. LUISIA PLATYGLOSSA Rchb. fil. Mss. *Cymbidium triste* Hook. B. M. 3648. *Luisia trichorrhiza* Bl. Rchb. fil. Xenia I. 77. 8—18. *Luisia zeylanica* Lindl. l. c. p. 204.

Obs. Mihi Luisias iterum comparanti omnino patet, hanc cum L. zeylanica haud bene compositam, quae sepalo summo brevissimo, sepalis acuminatis, labello ligulato, columna brevissima longe abhorret. Nostra quidem peraffinis iconi Gaudichaudianae

16. LUISIA OCCIDENTALIS Lindl. l. c. sub 11:

L. spicis nanis sessilibus, sepalis petalisque incurvis aequilongis, labello cordato ovato oblongo convexo emarginato.

Wild in Neu-Granada. St. Martha—Purdie. (v. s. sp. comm. cel. Hooker.)

Flowers very small. Habit quite that of Luisia brachystachys. Pollen apparatus unknown to me.

1427. CYMBIDIUM *Sw.*

Nov. Act. Ups. VI. 70.

1. CYMBIDIUM ENSIFOLIUM Sw. l. c. 77. Huc Lindl. B. Reg. XXIII. (1837). 1976:

Foliis lineari-ensiformibus striatis acutis, scapis erectis multifloris, bracteis ovario multo brevioribus, sepalis petalisque lineari-oblongis acutis, labello indiviso, planiusculo oblongo undulato obtuso medio sulcato, sulco pone apicem bidentato.

Epidendrum ensifolium L. sp. pl. 1352. etc.

α. *striatum.* Bot. Mag. 1751.

β. *estriatum?* sepalis virescentibus petalisque albidis obsolete striatim sanguineo punctulatis, lineis nullis.

The variety of this plant originally introduced from China, we have not seen for some years; it had flowers distinctly lined with purple as in the fig. of Bot. Mag. That which is now more generally cultivated is what is here represented with greener sepals and pale whitish petals, both without lines, and seems intermediate between the first and the spotless Cymbidium xiphiifolium.

Rchb. fil. Bonpl. III. 250: Hongkong Hance! — Huc: *Cymbidium micans* Schauer in Act. Leop. XIX. Suppl. ip. 433. 1843:

Foliis elongato linearibus acutis tricostatis striatis complicatis acute carinatis recurvatisque, scapis erectis subsexfloris, bracteis scariosis acuminatis ovario ter brevioribus, sepalis petalisque lineari-lanceolatis striatis acuminatis, labelli lobis lateralibus obsoletis rotundatis, intermedio suborbiculari undulato revoluto; lamellis arcuatis apice incrassatis convergentibus.

China. Macao. August.

Perigonium ovario subaequale, 10''. Labellum concavum sepalis conspicue brevius, disco subtilissime velutinum, lobis lateralibus auriculas rotundatas in laminam (sc. hypochilium) obcordatam confluentes exhibentibus, terminali producto obtuse revoluto. Scapus subsexflorus, dodrantalis, inferne vaginis intus scariosis approximatis, superius in bracteas decrescentibus. Flores purpurei (?). Pollinia dorso bisectilia, sibi accumbentia. — Lindl. in Benth. Fl. Hongk. in Hook. Journ. Bot. VII. 35: On rocks near Cypripedium purpuratum in Oct. The flowers are of a dirty white, with violet spots.

2. CYMBIDIUM XIPHIIFOLIUM Lindl. Bot. Reg. 529. Rchb. fil. Bonpl. III. 250: Hongkong Hance!

3? CYMBIDIUM GIBSONI Paxton in Paxton Fl. G. III. 618. Xyl. 301?

Caule fusiformi articulato nudo, foliis lanceolatis acutis, spicis lateralibus striatis paucifloris, scapo squamis vaginantibus parum longiore, sepalis linearibus obtusis apice latioribus, petalis erectis obtusis, sepalo dorsali paulo brevioribus, labello ovato medio contracto apice recurvo obtuso, lamellis 2 arcuatis elevatis continuis.

Naturally allied to C. ensifolium and lancifolium, and is readily recognized by its fusiform, jointed naked stem, lateral inflorescence, unusual circumstances among Cymbidia. — Khasiya. Flowers sweet, greenish, with brown spots.

Obs. In Lindl. „Contributions to the orchidology of India" haec species in linea prima sub „188. *C. lancifolium* Hook." cum signo? affertur. In linea ultima contra declaratur: „C. Gibsoni is only a half monstrous state of this". In lineis ultimis in Paxton l. c. planta est „readily recognized by" etc. Jam, benevole lector, credas, quae placebunt. Equidem scire vellem, quid intercedat inter plantam, quae sit „half monstrous" atque, quae sit: „wholly monstrous." Rchb. fil.

4. CYMBIDIUM ERECTUM Wight Ic. V. I. (1851) 1753.

Leaves ligulate, succulent, rigid, deeply and obliquely emarginate, raceme erect, manyflowered; bracts small, fleshy sepals linear somewhat obtuse; narrower than the lanceolate acute petals: lip 3lobed, middle one pubescent and revolute at the apex, lateral ones acute, lamellae linear, straight.

Iyamally Hills, near Coimbatore. Aug. Sept.

Approaches C. aloifolium; its erect rigid habit, thick fleshy ligulate leaves, broad short scales at the foot of the scape at once proclaim it distinct. Colour of flowers is nearly the same in both, a blending of reddish and yellow deepening nearly to purple along the middle line; limb of lip purplish red, yellow near the base.

5. CYMBIDIUM CHLORANTHUM Lindl. B. R. XXIX. 1843. Misc. 102:

Foliis ensiformibus supra pseudobulbum breve oblongum equitantibus obtusis supra medium planis recurvis, racemo stricto foliis bre-

viore, bracteis minutiesimis, sepalis petalisque obtusis, labello basi pubescente apice retuso emarginato, laciniis lateralibus nanis triangularibus, lamellis distantibus arcuatis verrucosis.

Nepalese species. Loddiges. Strictly erect racemes as of C. ensifolium separate it widely from the majority of Indian species. Sepals and petals are green, the lip yellowish spotted with crimson at the base. After flowering the blossoms soon become of a dirty wine colour.

Huc: *Cymbidium variciferum* Rchb. fil. in Bonpl. II. 91:

Aff. C. ensifolio: labello ligulato, medio trilobo, lobis lateralibus apice acutis lobo medio paulo latiori superpositis, illo ovali acutiusculo minute lobulato, lobulis microscopice denticulatis, carinis carinulato varicosis 2 a basi in medium convergentibus, ibi parallelis, regione anteposita — disco basilari lobi medii — velutina.

Blatt länglich zungenförmig, pergamentartig. Blüthen gelbgrün, mit Purpur. Cultur der Herren Booth und Söhne.

6. CYMBIDIUM MADIDUM Lindl. Bot. Reg. XXVI. (1840) Misc. 6;

Foliis ensiformibus basi canaliculatis, racemis pendulis, sepalis ovalibus obtusis apiculatis patulis, petalis conformibus erectis, labello nudo per medium madescente oblongo, lobis lateralibus minimis intermedio oblongo obtuso basi paululum angustato.

East India imp. Rollisson. Leaves of C. chinense. Flowers dull yellowish green, with sepals about half an inch long. Labellum is yellower, with a deep purple stain inside and is together destitute of the lamellae so usual in this genus; in room of which there is a shining exsudation all along the axis. No smell.

7. CYMBIDIUM PENDULUM Sw. Nov. Act. Ups. 673. Lindl. Bot. Reg. XXVI. (1840.) 25:

Foliis ensiformibus distichis coriaceis oblique obtusis, racemis pendulis multifloris, bracteis minutis, petalis sepalisque lineari-oblongis obtusis, labelli trilobi lobis lateralibus acutis intermedio oblongo apiculato, lamellis continuis approximatis apice confluentibus.

Sylhet on trees. Roxburgh: also in the forests, which cover the Circar mountains as well as those of Bengal Noakote in Nepal: Wallich. The latter Botanist considered this plant different from that of Roxburgh, and it has smaller flowers; but I do not percieve in what the distinction otherwise consists. The species now figured was sent by Dr. Wallich to the Hon. and Rev. W. Herbert.

Perigonium flavum, labellum medio flaveolum, crista apice lobi medii et lobis lateralibus purpureis, labellum extus totum purpureum.

Lindl. Bot. Reg. XXVIII. (1842). Misc. 67:

Cymbidium pendulum var. brevilabre: differs materially in having a much widened shorter lip, the middle lobe of which is almost round; otherwise it appears to be the same. — Lindl. l. c. XXX. (1844). 24: eadem. Sepala et tepala olivacea. Labelli lobi laterales et basis lobii medii purpurei: anterior pars lobi antici alba medio flava; antice purpureo maculata. — Gardn. Chronicle 1854. 287: *Cymbidium pendulum var. atropurpureum*. A Borneo plant in the possession of John Knewles; proves to be a narrow leaved variety of this species, with deep purple sepals and petals, and yellow ribs to the lip. It is far handsomer, than the older variety. The same form is before us collected by Cuming in the Philippines.

8. CYMBIDIUM ALOIFOLIUM Sw. Nov. Act. Ups. VI. 73: Wight Ic. 1687. 1688:

Leaves ensiform, coriaceous, oblique, obtuse; racemes pendulous, many flowered; bracts minute, petals and sepals lanceolate somewhat obtuse, lip revolute, lateral lobes acute, middle one oblong, obtuse, plates interrupted, clavate, arcuate towards the base. Petals and sepals yellowish red, lip dark lilac, tending to purple. Neilgherries.

Raceme represented erect for want of room

9. CYMBIDIUM DEVONIANUM Paxt. Mag. X. 98. (Khasiya Hills, Gibson.)

10. CYMBIDIUM BICOLOR Lindl. Orch. 164. Lindl. Bot. Reg. XXV. (1839). Misc. 69:
Ceylon: imported by Loddiges. Flowers like C. aloifolium, only streaked and stained with very deep crimson. Readily distinguished by having a sac at the base of the lip.

Huc: *Cymbidium pubescens* Lindl. Bot. Reg. XXVI. (1840). Misc. 177:

Foliis ensiformibus striatis apice oblique bidentatis, racemo brevi pendulo, bracteis minimis squamaeformibus, sepalis petalisque linearibus acutiusculis, labelli trilobi basi saccati intus pubescentis laciniis lateralibus acutis intermedia oblonga subundulata obtusa, lamellis rectiusculis medio interruptis.

Sincapore. Cuming. Loddiges. Short raceme of rich purple flowers bordered and spotted with brilliant yellow. Nearly allied to C. Finlaysonianum and C. bicolor, but its flowers are smaller; its raceme shorter, and its downy lip is quite different.

Lindl. B. Reg. XXVII. (1841). 38: Differs from C. Finlaysonianum in having short racemes, smaller flowers and a hairy lip with the lamella nearest the end destitute of any appendages; from C. bicolor also the short racemes and hairy lip divides it, but it corresponds with that species in the remarkable character of a shallow bag being present at the base of the lip.

11?? CYMBIDIUM IRIDIFOLIUM All. Cunn. Bot. Reg. XXV. (1839). Misc. 37:

Foliis elongato-linearibus, racemis multifloris bracteatis, perianthii foliolis patentibus, exterioribus tribus ellipticis obtusis, labello trilobato lobo intermedio linguiformi disco ecarinato glanduloso punctato nitido.

On decayed truncs of trees in large masses. Damp shaded woods on the Brisbane river. July 1828. This plant was alive at Kew. New-South-Wales.

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12. CYMBIDIUM PLICATUM Harv. Comp. to Bot. Mag. II. 203:

Scapo erecto vaginato multifloro, spica ovata, bracteis ovario longioribus lineari-lanceolatis, sepalis erectis obtusis, labello trilobo, lobis lateralibus obtusis incurvis, medio truncato involuto ciliato, foliis radicalibus ensiformibus plicatis, scapo longioribus. — Hook. Ic. (1837). II. Tab. CIV.

Hab. wet spots by the sides of drains and in marshes on „the Flats" near Wynberg rare. Dec. 1835. W. H. Harvey.

13. CYMBIDIUM PEDICELLATUM Sw. Cf. Walp. Ann. I. 784.

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14. CYMBIDIUM EBURNEUM Lindl. Bot. Reg. 1847. t. 67. Cf. Walp. Ann. I. 784. Sed habitat in India orientali.

15. CYMBIDIUM MASTERSII Griff. Lindl. Bot. Reg. XXXI. (1845). 50:

Foliis distichis anguste ensiformibus obtusis, pedunculo erecto squamis herbaceis equitantibus acutissimis imbricato, spica brevi pauciflora squamis immersa, sepalis petalisque lineari oblongis acutis, labello obovato trilobo intus pubescente, lamellis continuis, apice confluentibus in tuberculum subtridentatum expansis, lacinia intermedia oblonga lobata undulata, lateralibus rotundatis planis.

C. Mastersii Griffith in ht. Bot. — Calc. Lodd Cat. n. 1233.

East Indias, received by Mrrs. Loddiges. Snow white flowers, sweetscented, with the fragrance of almonds. Its erect flower stalk closely covered with long green sharp-pointed equitant imbricated sheaths is quite unlike of that of any other species. — Paxt. Fl. G. III. p. 21. Pl. 78. — Lemaire l. c. 289.

16. **CYMBIDIUM ELEGANS** Lindl. Orch. 163. — Sert. Tab. 14:

Nepal Wall. 1821. Drawing in posses. of the Hon. Court. of Dir. of East Ind. Comp. Leaves 1½" long, ⅜—½" wide, acuminate, obliquely emarginate at the point; as stout as a Europaean Typha, at the base they combine into a broad, fleshy sort of bulb. Scape arises from near the base of the leaves, 18" long and so loaded with flowers for half its length, that it hangs down in a pendulous manner, below the flowers it is loosely covered with long, inflated, acuminate, imbricated scales, which abruptly change into small, narrow, scale-like bracts. The raceme is from 6—10—11 inches long, nodding, cylindrical, very compactly covered with pale salmoncoloured flowers, each rather more than one inch and a half long, and greenish before they expand. Sepals form a kind of inverted cone, so little do they open; they are linear oblong, acute, of the same figure, but the petals are the shorter and narrower. Lip is parallel with the column, obovate, straight, wedge shaped ad the base, divided at the point into 3 acute lobes, of which the middle one is the broadest and longest, it is of the same colour as the sepals, but is a little spotted with red. Along its centre there runs a double elevated line, which is separated near the base into two spreading lamellae. Column very long, clavate, half terete, with a convex plain anther, a little prolonged in front. Pollen masses are two, pearshaped, furrowed out at the back, and planted separately upon a transversely oval gland. In this respect the present differs somewhat from other true Cymbidia, but not sufficiently to deserve being made into a distinct genus.— Cf. Walp. Ann. III. 548. *Cyperorchis* Bl.

17. **CYMBIDIUM VIRENS** Lindl. B. Reg. XXIV. (1838) Misc. 59:

Foliis gramineis recurvis serrulatis subtrinerviis, scapo laxe vaginato unifloro, pedunculo tereti bractea duplo longiore, sepalis linearibus obtusis concavis patentibus, petalis brevioribus conformibus supra columnam conniventibus, labello oblongo indiviso apice revoluto imberbi plicis duabus carnosis lamellatis apice liberis fovea truncata irregulari utrinque infra apicem plicarum.

A native of Japan, whence it was brought to Europe by Dr. Siebold. Flowered in April in the nursery of Mrrs Rollissons of Tooting. It has greenish sepals and petals, about 1½" long, and a pale dull yellow lip, slightly blotched with dull red. I did not remark any smell. No doubt this will prove a greenhouse species.

18. **CYMBIDIUM GOERINGII** Rchb. fil. Walp. Ann. III. 547.

19. **CYMBIDIUM GIGANTEUM** Wall. Lindl. Orch. 163. Lindl. Sert. tab. 4:

Leaves two feet long, 7 nervous, narrow, thick and tough, dilated at the base. Scape erect, closely covered at the base with loose imbricated striate scales, bracts short, ovate scales, ovary ½". Flowers rather closed, dull purple tesselated, very large for the genus. Sepals oblong, acute, erect, 1½", nearly equal, 2 lateral uppermost. Petals linear lanceolate, acute, spreading, rather shorter than the sepals. Lip oblong, tapering at the base, where it adheres to the column, complicated, 3-lobed: the lateral lobes entire, flat narrow, the intermediate crisp, ciliated, the disk with 2 converging ciliated lamellae, ending in a line of hairs, that reach to the point of the lip, and bordered by 2 distant hairy lines on each side. Column clavated, edged, smooth, with a terminal anther, which 'adheres firmly to the back and hardly opens in front. — Kamaon Wallich 1821. — Lindl. Paxt. Fl. G. II. p. 14 279. Xyl. 143; „anther really articulated with column". — B. Mag. 4844.

Quid? Certe non Cymbidium:

CYMBIDIUM — All. Cunn. B. Reg. XXIV (1839.) Misc. 38.

Caule radicante, scandente, foliis alternis lanceolatis acutis, subcarnosis, racemis axillaribus laxis, foliis perianthii conniventibus, labello carnoso trilobato, basi cavo.

A Vanda looking plant, in habit very much like V. teretifolia Lindl. Coll. bot. t. 6: Can it be Ep. triste Forst., which that Botanist discovered in New-Caledonia? My

plant, of which I only detected a single specimen, was hanging to the truncs of Callistemon rigidum in small open savannahs subject to inundation; near the banks of the Brisbane River. Sept. 1839."

1427/2. ANSELLIA *Lindl.*

Bot. Reg. XXX. 1842. sub 12. — Walp. Ann. I. 784.

Sepala oblonga, carnosa, aequipatentia, libera. Petala conformia, recta, patula, duplo latiora. Labellum sessile patulum, trilobum, bilamellatum, lobo medio minore verrucoso. Columna elongata, marginata, basi utrinque auriculata. Anthera bilocularis. Pollinia 4, sessilia, basi contigua, duobus dorsalibus multo minoribus; glandula angusta utrinque acuminata. Caulis elongatus, teres, apice tantum foliosus. Folia plicata, coriacea. Panicula terminalis.

It appears, that this genus must be referred to that set of Vandeae of which Cymbidium must be taken as the type. In fact it is very near that genus in technical characters, though extremely different in its manner of growth. The auricles at the base of the column, the 4 pollenmasses and the verry narrow gland fining away to each side will serve to distinguish it.

1. ANSELLIA AFRICANA Lindl. Bot. Reg. (1842.) XXX. sub 12:
When Mr. Ansell was ill from the effects of the Niger expedition, at Fernando Po, he found in Clarence Cove, growing on the stems of the Oil Palm (Elais guinensis) an epiphyte with a slender jointed stem about 2 feet long, having at the upper end many stiff, plaited, lanceolated, 5 ribbed leaves, and a terminal panicle of flowers as large as those of Vanda Roxburghii, with dark purple spots on a pale ground. Of that plant we possess a dried specimen, with one of the lower branches of the panicle in good preservation, and as it proves to be a new genus we take the opportunity of naming it after its discoverer. — Bot. Reg. 1846. tab. 30. — !Regel Gartenflora III. t. 95.

2. ANSELLIA GIGANTEA Rchb. fil. Cf. Walp. Ann. I. supra c. — Rchb. fil. in v. Schl. Bot. Ztg. 1852. 688. *Ansellia africana* Lindl. und *gigantea* Rchb. fil. Linnaea XX. b. p. 673. Frische Blüthen erster Art setzten mich im letzten Winter in den Stand, beide Arten weiter zu vergleichen, wie ich es in der Linnaea versprochen. Erstere ist zwar ganz vortrefflich im Bot. Reg. (1846. t. 30.) abgebildet, allein die Pflanze muss schwächlich gewesen sein, ich kenne die Blüthen grösser und schöner. Meine A. gigantea erreicht nur die halbe Blüthengrösse jener. Sie unterscheidet sich vor Allem durch die Lippe, deren Mittelleisten gekerbt und gekräuselt sind: die Warzen fehlen, doch fand ich sie auch bei *Ans. africana* viel geringer, als sie abgebildet wurden. Die seitlichen Hüllblätter sind kürzer, als die äusseren; der Kegelaufsatz der Anthere ist kurz. Das Blüthengewebe ist zarter und gleicht dem des Grammatophyllum multiflorum (nicht speciosum !!). Jedenfalls eine wichtige Bestätigung der Lindley'schen Gattung. Beide theilen Tracht, die Oehrchen am Fuss der Säule, die gespitzte Anthere, was Alles zur Trennung von Cymbidium genügt. Eine Farbenskizze zweier Blüthen, die ich erhielt, zeigt folgendes. Die Hüllblätter sind blass gelbgrün; mit braunen Flecken, welche fast zweireihig auf der unteren Hälfte der Innenseite stehen. Seitenlappen der Lippe und Säule ähnlich gefärbt, erstere innen braun gestreift, Mittellappen der ersteren schön citronengelb.

1328. GROBYA *Lindl.*

Bot. Reg. XX. (1835.) 1740.

Perianthium explanatum, bilabiatum. Sepala lateralia basi connata, sigmoidea, labello supposita, supremo erecto breviora. Petala dilatata,

sepalo multo majora, erecta, conniventia; labellum liberum, lobatum, nudum, cum basi columnae articulatum, ascendens, sepalis minus, (nanum). Columna erecta semiteres, arcuata, basi incrassata; anthera proclivi, stigmate fornicato.

Pollinia 2, postice lobata, caudiculis duabus brevioribus glandulae ovali adnatis. Herba Brasiliensis, pseudobulbosa, foliis gramineis, racemo pendulo radicali. — Near Cymbidium.

1. GROBYA AMHERSTIAE Lindl. l. c.:

Pseudobulbi ovati, virides teretes, cicatricibus 1—2 foliorum annulati. Folia 3—4 e vagina squamata, linearia, striata, acuta, debilia. Racemus pendulus, densus, 3 pollices longus, pseudobulbis duplo longior. Sepala pallide ochracea, unicolora. Petala maculis fusco-purpureis seriatis notata. Labellum cuneatum, apice 5 lobum lobo quinto caeteris exteriori, disco nudum, atropurpureum. Columna pallida, facie purpureo fasciata.

Brazil, sent by Heyne.

2. GROBYA GALEATA Lindl. Bot. Reg. XXVI. (1840.) Misc. 197:

Petalis oblongis oblique rhombeis apice rotundatis cum sepalo dorsali breviore in galeam dispositis; sepalis lateralibus deflexis, basi connatis, labelli tripartiti laciniis lateralibus linearibus, intermedia cuneata truncata, disco basi quadridentato tuberculis nitentibus verrucoso.

Brazilia. I received specimens from Mrrs. Lucombe, Pince, and C. of Exeter, and Mr. Barker. Its habit is of Grobya Amherstiae, but flowers different. They are dull green, stained with purple, and the lip is indistinctly banded with the same colour. Petals are much larger, than the dorsal sepal, beneath which they are so placed as to resemble a helmet overshadowing the lip. This species indicates the affinity of Malachadenia, which is appearently allied to Grobya.

1430. CREMASTRA *Lindl.*

Orch. 172.

Huc: *Hyacinthorchis* Blume. Cf. Walp. Ann. III. 547.

1431. GRAMMATOPHYLLUM *Blume.*

Bijdr. 379. Tabelle 20. — Diagn. Gen. Cf. Walp. Ann. III. 550.

1. GRAMMATOPHYLLUM SPECIOSUM Bl. Bijdr. 377. etc. Lindl. Paxt. Fl. G. II. Tab. 69:

Caulescens foliis distichis ensiformibus, enerviis, scapo erecto racemoso, floribus coriaceis pedicellis aequalibus, sepalis petalisque obovato-oblongis undulatis obtusis, labelli lobo medio velutino ultra medium glabro abrupte tricostato circa costam in fundo piloso.

We have it from the streat of Malacca, where the late Mr. Griffith found it, with „a scape, six feet high, and an inch in diameter at the base." — Walp. l. c.

2. GRAMMATOPHYLLUM MACRANTHUM Rchb. fil. Xenia II. p. 16. Huc *Pattenia macrantha* Wight. Ic. VI. t. 1780. (1851). — Huc: *Grammatophyllum fastuosum* Lindl. Paxt. Fl. G. II. 159. sub 69:

Foliis...., scapo erecto subcorymboso, floribus coriaceis pedicellis duplo brevioribus, sepalis petalisque obovatis undulatis obtusis anticis incurvis, labelli lobo velutino infra basin glabro tricostato, circa costam in fundo scabropiloso.

A single specimen of this majestic plant was sent us from Malacca by Griffith who found it on trees, and saw no leaves. It is upon the whole a finer species, than Gr. speciosum itself. The flowers are not quite so large, but in consequence of the greater length of their stalks (as much as 5 inches), they form a kind of corymb. Their colour is unknown to us. Both sepals and petals are more spathulate, the two anterior of the former far more incurved and the naked ribs of the lip, instead of reaching almost as far as the point of its middle lobe, and then terminating abruptly, gradually lose themselves in the pile of velvet at the very base of the lobe. The lip appears moreover to be much more coriaceous.

3. GRAMMATOPHYLLUM MULTIFLORUM Lindl. B. Reg. 1838. Misc. 80. 1839. t. 65. (perigonii phyllis prope omnino fuscis); var. tigrinum ibid. 1842. t. 69. (perigonii phyllis flavidis maculatis) Lindl. Paxt. Fl. G. l. c.:

Foliis lanceolatis coriaceis subundulatis striatis in apicem pseudobulbi ovato insidentibus, scapo incurvo, racemo erecto longissimo cernuo multifloro, floribus membranaceis, sepalis oblongis obtusiusculis planis, petalis acutis subconformibus angustioribus, labelli trilobi pubescentis medio hirsuti lobo intermedio plano oblongo rotundato, lateralibus erectis subfalcatis, jugo in medio carnoso elevato ad basin lobi intermedii interrupto in costas 2 lamelliformes producto, columnae margine supra basin elevato flexuoso incurvo foveam altam obconicam circumdante.

The two varieties of this species, one with wholecoloured, the other with spotted flowers, were brought from the Philippine islands, and diff. altogether from both G. speciosum and fastuosum in having thinner membranous flowers, instead of the thick leathery texture of those two species, and drooping, not erect racemes. Dr. Blume suggests, that this may not be different from his G. scriptum; and it is not impossible, that it may include Rumphius second sort of Angrecum scriptum (the one he has figured); but it can scarcely be compared with his first sort either in leaves, or pseudobulbs or in the marking of the flowers, which have nothing grammical about them or resembling Hebrew characters. The name then, given by us in 1839, will not have to be disturbed.

4. GRAMMATOPHYLLUM SCRIPTUM Blume, Rumphia IV. p. 48., Walp. l. c. Lindl. Paxt. Fl. G. l. c.

Under this name is now arranged Rumphius's Angrecum scriptum, and the Cymbidium, Epidendrum, or Gabertia founded upon it. We have never seen any specimens; the plant is not in cultivation, nor do we find, that Blume himself has any personal knowledge of it, for what he says of it, is chiefly, if not wholly, dereived from Rumphius. That author describes two sorts of Angrecum scriptum, one of which grows upon the Mango trees, the other on the Calappa Palm tree. The first has great flattish conical pseudobulbs (bursae), deeply furrowed lengthwise, and each bearing 3 or 4 long narrow leaves like those of „Helleborus albus or Hyris", thick, firm, narrow below, widening upwards, above a foot long, 3 digits wide; and having in the middle 3 ribs, which dont project much. The flower stem has no leaves, is 4 or 5 feet high, a little curved at the top, from which the flowers grow regularly one above another as in Hyacinths. The flowers themselves are as big as a Narcissus, composed of 5 outer petals, narrow at the bottom, broader at the top, some yellow, others greenish-yellow and inscribed with large spots and characters and like Hebrew letters, but not distinct; they are reddish-brown, and different in different flowers. In the middle is a rolled up petal resembling a goblet, of a paler colour, streaked with brown or purple lines. Of this he says there are certain varieties. — The second, which grows on the Calappa Palm trees, and of which has he given a figure. The bursae or pseudobulbs are as in the other, but smooth, not jointed and they are not so much furrowed lengthwise. The leaves are shorter, broader, and thicker, without any ribs except that in the middle, from 13 to 16 inches long, and 4 broad; they grow from the young pseudobulbs (ex tenuis bursis). The flowering stem is from 5

to 5½ feet long, as thick as the little finger, and covered with bloom for two thirds of its length. The flowers are not unlike those of the first sort; they have 5 green petals, one of which is always turned inwards. These petals are painted with thick brown characters, which form no particular figure, but are chiefly spots; among them however you may make out the letters A. J. R. The lip is paler, than the other petals and marked lengthwise with brown lines.

In Ternate, according to Rumphius, the matrons, and especially the wives, sisters and daughters of the kings (who are all called Putri in Malay and Boki in the Moluccas), so entirely appropriate these flowers to themselves, that a common woman and especially a slave would offer there a great affront if she were to put them on her head. The flowers are reserved exclusively for the great ladies, who cause them to be sought for in the forests, and braid them in their hair, saying the nature herself has shown, that such flowers are not fit for people of low degrees since they grow nowhere except in high places; hence they are called Bouga boki and Bouga-putri, or the Princesses flower. It would also appear, that the Malay gentlemen make from the seeds a philtre, which has a surprising effect upon the ladies, who swallow it.

It is far from improbable, that these two sorts of lettered Angrec are distinct species, judging from what is said of their leaves. The second kind may indeed be identical with the species next to be mentioned.

GRAMMATOPHYLLUM ? PUBESCENS Spanoghe in Linnaea XV. 477. Timor. Descriptio non adest.

GRAMMATOPHYLLUM FINLAYSONIANUM LO. 173. = *Bromheadia palustris* Lindl. = *Bromheadia Finlaysoniana* Rchb. fil.

1432. TRICHOCEROS *H. B. Kth.*

Nov. Gen. et Sp. I. 338.

1. TRICHOCEROS PARVIFLORUS H. B. Kth. N. G. Sp. I. Tab. 36. p. 337. Lindl. Benth. Pl. Hartw. 150. Walp. Ann. III. 563. sub Hofmeisterella. Rchb. fil. Xenia I. Tab. 9. I. II. 1—6. pag. 21:

aff. attennifero Hb. B. Kth. labelli partitionibus lateralibus margine ciliolatis, disco glabris.

Trichoceros parviflorus Humb. Kunth. N. G. Sp. Pl. I. 337! Tab. 76! Lindl. in Bentham Pl. Hartweg. 150! — Cf. de charactere generis ubique false descripto: Rchb. fil. de pollinis Orchid. genesi ac structura p. 30. et Rchb. fil. in Walp. Ann. III. 563.

Caulis calamum columbinum crassus, lignosus, hinc hyalino et adpresse vaginatus, apice tribus vaginis membranaceis amplis acutis foliisque geminis oblongo lanceolatis acuminatis coriaceis munitus, pseudobulbo terminali ovali ancipiti monophyllo. Pedunculus axillaris ex folio stipante supposito inferiori. Sympodium contra continuatur ex gemme axillari vaginae fultientis secundae! Radices adventitiae amplissimae, strato externo in sicca planta tenuissimo longe a centro remoto. Pedunculus gracilis, — pedalis, teretiusculus, raro brevique vaginatus (3); apice flexuoso racemosus. Bracteae oblongae mucronatae ovariis pedicellatis multo breviores. Perigonia membranacea postica. Sepala oblonga acuta. Tepala subaequalia minute ciliolata. Labellum tripartitum minute ciliolatum. Partitiones laterales lineares obtusiusculae utrinque secus nervum alternanti violaceo guttatae; partitio media subaequalis cuneato oblonga acutiuscula; nervi ? dimidio inferiori velutini. Gynostemium humile postice villosum. Androclinium apicilare immersum!, postice acutangulum; rostellum rotundatum medio erecto lanceum. Anthera obpyriformis, tenuissima. Pollinia quaterna, collateralia (nec incumbentia, quod facile putabis anthera haud caute

protracta); interna minora, externa majora excavata interna in foveam suam pro parte recipientia. Caudicula linearis. Glandula rotunda.

Lindl. in Benth. Pl. Hartw. 150: In muros rupesque. Loxa.

2. TRICHOCEROS PLATYCEROS Rchb. fil. Xenia I. p. 22. Tab. 9. III:

Sp. nov. aff. T. murali Lindl.: sepalis inaequalibus, summo recto breviore, lateralibus obliquis; labelli basi ecallosi villosi lobis lateralibus a basi unguiculata semiovatis; rostello erecto.

Sepalum summum oblongum acutum cucullatum, quo fit, ut brevius videatur. Sepala lateralia oblongofalcata, introrsa acuta. Tepala ovata acuta margine minute denticulata; maculata. Labellum a basi angustiori oblongum acutum, lobi basilares a basi unguiculata semiovati; hi ac basis lobi medii bene velutini, atropurpurei; totus margo minutissime denticulato ciliatus. Gynostemium humile, postice villosum; rostellum minutum erectum. Loxa · Peruv. v. Warscewicz.

3. TRICHOCEROS MURALIS Lindl. O. 174. Rchb. fil. Xenia Orch. I. p. 23:

Aff. T. platyceroti sepalis aequalibus rectis, labelli basi unicallosi velutini lobis lateralibus linearibus obtusatis, divaricatis, rostello rectangulo porrecto.

1433. GEODORUM *Jacks.*

Bot. Repos. 626. t. (1810). — Lindl. Folia I. Nov. 1. 1854. Sequentia. (Addimus pauca addenda in observationibus.)

The species of this well-marked genus are undistinguishable in a dried state, unless attention is paid to the processes which appear upon the surface of the lip. The not knowing this and the badness of materials led to a very imperfect set of definitions in L.O., as was indeed hinted in a note to that work. Even now the species require to be studied carefully in a live state.

SPECIERUM ANALYSIS.

Scapo foliis longiore, labello acuto . . . . 1. *purpureum.*
„ „ breviore, labello obtuso.
Labellum infra apicem callosum,
callo semilibero.
Lab. apice dilatatum bilobum . . . . 2. *dilatatum.*
„ „ angustatum emarginatum.
Folia subsessilia . . . . 3. *pictum.*
„ longe petiolata . . . . 4. *rariflorum.*
callo omnino adnato
bicostato . . . . 5. *fuscatum.*
tricostato
Flores carnosi, vaginis angust. depaup. . . . . . 6. *javanicum.*
„ membranacei, vaginis maxim. membr. . . . 7. *semicristatum.*
Labellum nudum. . . . .
ante sacculum bicallosum . . . . 8. *candidum.*
ante saccum nudum . . . . 9. *citrinum.*

1. GEODORUM PURPUREUM R. Br. LO., no. 1. Lindl. Folia sub 1:

Limodorum nutans Roxb. Corom., I. t. 40; Fl. ind., III. 470. *Malaxis nutans.* Willd. sp. pl. 4. 93.

This species is distinguished by two circumstances; the scape is longer, than the leaves, and the lip is acute. I have seen no specimen. Roxburgh says, that the spike is oblong and pendulous, with distant flowers of a beautiful rose-colour.

Wild in the Indian Peninsula; moist valleys amongst the Circars — Roxburgh.

2. GEODORUM DILATATUM R. Br. Bot. Reg. t. 675. (bad). L.O., no. 8. Wight ic. 3. tab. 912. Lindl. Folia sub 2:

Limodorum recurvum. Roxb. Coromandel plants, I. t. 39. — *Malaxis cernua.* Willd. IV. 93. — *Otandra cernua.* Salisb. in Hort. Trans., I., 261. — *Geodorum pallidum.* Don. prodr. fl. Nep. 31.

A common Indian species, with whitish flowers, marked with pink streaks and yellow. It has large falcate bracts, which in a dried state are membranous. The lip is either crenulate or entire at the edge. The scape is the tallest of any except G. purpureum.

Wild in the East Indies; moist valleys among the Circars—Roxb.; Ceylon—Macrae, Walker; Sikkim, at 3000 feet — J. D. Hooker; Sylhet — Wallich (v. s. sp.)

Obs. Wight l. c. „I found it within a few miles of Coimbatore Kanathkoovoodoa. Aug. 1818. in clefts of rocks under the shade of bushes."

3. GEODORUM PICTUM LO., no. 2. Lindl. Folia sub 3:

This plant has broad nearly sessile leaves, and a dense oblong refracted raceme. The bracts and vaginae are not membranous, when dried.

Wild in tropical New Holland—R. Brown; Wide Bay — Bidwill. (hab. s. sp. comm. cel. Hooker.)

4. GEODORUM RARIFLORUM Lindl. Fol. sub 4:

G. foliis longe petiolatis, scapo breviore, vaginis bracteisque parvis herbaceis, racemo raro, labello basi scrotiformi ovato obtuso emarginato callo sublibero minime bidentato caeterum nudo.

I found some specimens of this, under the name of Limodorum candidum, among some miscellaneous Assam plants given me by Sir W. Hooker. It has a more distinct spur, than any other, and narrow spreading sepals. There is no callosity at the mouth of the pouch.

Wild in Assam—Jenkins (v. s. sp. comm. cel. Hooker.)

5. GEODORUM FUCATUM Lindl. in Bot. Reg. t. 1687. Folia Nr. 5.

Wild in Ceylon. — Walker. (v. sp. in herb. Hooker.)

A verry pretty rose-coloured species, readily known by the pair of parallel fleshy ribs, which represent the free callus of the preceding species, and by its gibbous lip.

Obs. Lindley l. c. *Geodorum fucatum*: Scapo florifero folio duplo breviore, spica pendula congesta, labello gibboso ovato emarginato integerrimo, lineis duabus callosis elevatis. Folia e tubere subterraneo cucullatim cicatrizato erumpentia, oblonge lanceolata, acuta, plicata, pedem longa, scapo florifero duplo longiora, frugifero subaequalia. Scapus radicalis, erectus, vaginatus, apice recurvus, et spicam ideo patulam, partibus omnibus inversis, compactam, brevem gerens. Bracteae lineares, acutae, ovarii longitudine. Flores subcampanulati, magnitudine et facie G. dilatati. Sepala lineari-oblonga, acuta, rosea, apice paululum recurva petalis paulo latioribus omnino conformia et parallela. Labellum ob spicam inversam anticum, revero posticum, ovatum, subtus gibbosum, cum columna parallelum et continuum, nec articulatum, integerrimum, emarginatum: roseum venis lateralibus intensioribus pictum; lineis duabus latis, elevatis, parallelis, contiguis, ochraceo-sanguineis in medio.

Ceylon. Watson. — Resembles G. dilatatum, but has rather smaller flowers and a very different labellum.

6. GEODORUM JAVANICUM Lindl. l. c. sub 6:

G. foliis oblongis sessilibus scapo univaginato aequalibus, bracteis herbaceis angustissimis ovario aequalibus, floribus carnosis, labello retuso callo tricostato tuberculoque didymo ad ostium sacci.

Cistella cernua Blume Bijdr. 293. t. 55.

The figure in Blume is so bad, that no one could suppose it belonged to the plant now before me; and yet I presume there can be no doubt about the matter. The bracts are small, very narrow and herbaceous, and the flowers when dry have a sin-

gularly fleshy texture. It is a small species with no apparent stalks to the leaves. Colour of flowers unknown.

Wild in Java—Lobb; near Buitenzorg, very rare—Blume (v. s. sp. in hb. Hooker.)

Obs. Timeo, ne hoc sit ipsissimum G. dilatatum RBr. Rchb. fil.

7. GEODORUM SEMICRISTATUM Lindl. l. c. sub 7:

G. foliis oblongo-lanceolatis petiolatis, vaginis 3 maximis membranaceis, bracteis setaceis, labello ovato emarginato callo retuso tricostato adnato tuberculoque didymo ad ostium sacci (floribus carnosis).

Very much like G. dilatatum in habit. Colour of flowers unknown.

Wild in the Philippines—Cuming, (v. s. sp.)

Obs. Forsan huc pertinet Dendrobium nutans Presl. Symb. Bot. 1832. XXIII. R. fil.

8. GEODORUM CANDIDUM Wall. Cat. no. 7374. Lindl. l. c.:

Limodorum candidum Roxb. fl. Ind. III. 470.

(A) Lip contracted at the point and nearly even. Leaves sessile.

(B) Lip wider at the point and rugose. Leaves with long stalks; flowers smaller.

This species, although one of the smallest in stature, has larger flowers than any. The leaves in A are sessile, the raceme very dense and somewhat globular, and the sepals and petals very acute; the lip is ovate with a slightly dilated emarginate point, within which it is nearly smooth; the sac of the lip is a mere dimple and hardly visible externally, although its origin its overlooked by a pair of large callosities. Flowers white; in A they are very like the figure of G. citrinum in Andrews' Repository. Probably the two supposed varieties will be hereafter distinguished. They are very different in habit.

Wild in Sylhet — Roxburgh; Moulmein — Griffith, Wallich; B. Khasia — Lobb, (v. s. sp.)

9. GEODORUM CITRINUM Jackson in B. Rep. t. 626. LO., no. 5, Lindl. l. c. sub 9:

This, the original species of the genus, is known by its pale-yellow flowers, and lip without a trace of appendage or callosity upon its surface. The flowers are no doubt exaggerated as to size in the figure in Andrews' Repository; according to Dr. Wallich's Chittagong specimen, they are about as large as in G. dilatatum.

Obs. Ill. Lindley non affert iconem Bot. Mag. (1821) 2195. — R. fil.

1435. DORITIS *Lindl.*

Orch. 178.

1. DORITIS BIFALCIS Rchb. fil in Otto Hamb. Gartenztg. 1860. p. 161. (Citatum in Xeniis II. 7. omissum).

1436. CHELONANTHERA *Bl.* et
1437. ACANTHOGLOSSUM *Bl.*

= *Coelogyne* Lindl.

1438 SUNIPIA *Lindl.*

Buchanan Hamilt. in Rees Cycl. sub Steli. Lindl. Orch. Scel. LO. p. 179. Lindl. Fol. I. impressa Jan. 10. 1853.

Sepala cartilaginea, aequalia, ringentia; lateralibus labello suppositis a dorsali basi sejunctis. Petala nana. Labellum posticum, integrum, sessile, sepalis minus, carnosum, concavum, inappendiculatum. Columna nana, libera, mutica, basi vix producta. Pollinia 4, per paria caudiculis 2 distinctis apice contiguis adnata; glandula nulla. Anthera dorso affixa, verticaliter 4- valvis. Herba epiphyta, Himalensis, pseu-

dobulbosa. Folia solitaria, coriacea. Scapus radicalis, apice spicatus. Bracteae membranaceae, spathaceae, floribus longiores.

The very peculiar anther opening vertically, with two pairs of equal pollen-masses adhering to as many tough terete elastic legs or caudicles meeting at the rostellum, which however furnishes no gland, distinguishes this very clearly from all other genera having the habit of a Bolbophyll, except Acrochaene. Ione differs in its having a pair of well-defined glands. The name Sunipia, (from Sunipiang, an Indian word), was applied by Buchanan Hamilton to various Bolbophylls, among which this would have been included at the time when he flourished.

1. SUNIPIA SCARIOSA Lindl. in Wall. Cat., n. 7373. LO. n. 1. Sert. Orch., frontisp., fig. 8; with a good description.

Ornithidium bracteatum Wallich MSS.

Pseudobulbs small, ovate, slightly elongated. Leaves from two to four inches long, by three to seven lines broad. Flowers white, stained with pink, shorter than the carinate glumaceous bracts, which, when closed, seem as if their outline was triangular. Lip perfectly destitute of fringes. My specimens vary from five inches to a foot in height.

Wild in the Khasia Hills-Griffith, T. Lobb; Nepal—Wallich; Sikkim-Himalaya, 5—6000 feet J. D. Hooker. (v. s. sp.)

Lindl. Sertum l. c.: Wallich met with in May 1818, at Toka in Nepal, called Sunipiang, where the name was taken by Dr. Buchanan Hamilton; all which were described by the late James Smith in Rees's Cyclop. under them appear to have belonged to Bolbophyllum. Rhizomate held down by numerous perpendicular roots as in Iris. From these spring in abundance small inversely pear-shaped pseudobulbs about 1" and terminated by a single leaf. Each leaf 4" long, oval lanceolate, flat, shining, firm, double-toothed at the point, contracted at the base into a short channelled petiole. Scapes spring from the base of pseudobulbs, very slender, erect, rigid, brownish green, hardly thicker, than piece of twine, clothed with a few long narrow sheathing scales. These are terminated by distichous spikes, which are drooping, 6" long. Flowers exactly alternate in distichous manner, yellowish purple, nearly parallel with the flattened rhachis, which is half surrounded below each flower by a single bract, dry ovate, concave, acuminate, striated, sometimes expanded into an ovate obtuse lobe on each side. Flowers twolipped, much shorter, than the bracts, partially hidden by them. Sepals ovate, obtuse, slightly tinged with pink, the lateral ones the largest, and placed next the rhachis at the back of the labellum. The petals are roundish, ovate, white, very obtuse, thrice as short as the sepals. Labellum fleshy, tinged with pink, tongue-shaped, blunt, much shorter than the sepals, and a little dilated near the base, where the margins stand erect, producing something the appearance of a shoe. Column short, not at all extended at the base into a foot, but quite continuous with the ovary; in front it is hollowed out into a stigma and at the summit it bears the anther. From unusual structure of the anther the genus derives its principal distinguishing feature. Instead of being loose in the antherbed; hinged by its back and opening along with its under side so as to allow the pollen masses to drop out upon the antherbed, it is so festened down by its face, that the latter operation becomes impossible and in order to provide for the escape of the pollen, the cells open vertically, so that when their sides are drawn as under the pollen masses are at once seen reposing in their places. Pollen masses themselves are 4, adhering in two pairs, and according to memoranda made since, they are attached to 2 caudicles the nature of whose connection with the stigma is not yet known.

1438/1. ACROCHAENE Lindl.

Folia l. Jan. 10. 1853.

Sepala explanata, membranacea, lateralibus majoribus triangularibus columnae pedi producto adnatis. Petala minora. Labellum cum pede

columnae articulatum, membranaceum, complicatum, inappendiculatum, in columnam incumbens. Columna nana, mutica, basi longe producta. Pollinia 2, globosa, apice rima verticali fissa, caudiculis totidem teretibus apice contiguis adnata. Glandula 0. Anthera membranacea, incumbens, 1-locularis. Herbae epiphytae, Indiae septentrionalis, pseudobulbosae.. Folia coriacea. Racemi radicales, erecti, laxe vaginati.

What the true position of this and Sunipia may be is open to some question. The presence of a tough terete caudicle to each pollen mass points to Vandeae; but there is certainly no free gland. The habit of the only species is peculiar.

1. ACROCHAENE PUNCTATA Lindl. l. c.:

Pseudobulbus ovatus. Folium solitarium, coriaceum, oblongum, $^{7}/_{4}$ unciale, petiolo $3^{1}/_{2}$ unciali. Scapus radicalis, folio brevior, basi laxe vaginatus, squamis patulis lineari-lanceolatis membranaceis vestitus, apice racemosus. Bracteae squamis conformes, ovario vix aequales. Flores straminei, sanguineo-punctati. Sepalum dorsale erectum, ovatum, obtusum; lateralia triangularia. Petala uninervia, fimbriata. Labellum complicatum, trilobum; lobis lateralibus erectis obsoletis serrulatis, intermedio recurvo plano obtuso.

Wild in the Sikkim — Himalaya, at the height of 4000 feet—J. D. Hooker. (v. s. sp. et ic. pict.)

1438/^{a}. IONE *Lindl.*

Folia l. Jan. 10. 1853. Haec:

Sepala membranacea, basi aequalia, bilabiata, lateralibus parallelis saepius connatis, labello suppositis. Petala nana. Labellum posticum, integrum, sepalis majus vel aequale, margine membranaceum, medio striatum carnosum, saepius in apicem pugioniformem productum. Columna nana, semiteres, libera, mutica, basi producta. Pollinia 4, per paria glandulis 2 distinctis cartilagineis ovalibus adnata. Herbae epiphytae, Himalenses, pseudobulbosae. Folia solitaria, coriacea. Scapus radicalis, spicatus. Bracteae membranaceae, nunc spathaceae, floribus longiores.

With the habit of a Bolbophyllum or Didactyle, this genus unites the glands and pollen-masses of an Angraecum. Its long membranous two lipped calyx, dwarf petals, and large lip, with a fleshy axis usually extended into a dagger-shaped point, are very unlike anything belonging to neighbouring genera. I see no reason for regarding the glands as of a different nature from those of Vandeae, out of which this forms one of the transitions to Malaxids.

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§. 1. Latifoliae; bracteis spathaceis.

1. IONE CIRRHATA Lindl.

I. foliis oblongis scapo aequalibus, bracteis cucullatis acutis ovariis longioribus, sepalis lateralibus connatis, petalis rotundatis integerrimis, labello ovato oblongo integro lineis 2 elevatis basi clavatis aucto.

Very much like the next; but the leaves are longer, and the lip is not serrated, but is marked by two elevated white lines, resembling the columnar cirrhi of a Catasetum. Flowers dirty white, with purple streaks and a deep violet lip. My account is almost wholly taken from Mr. Cathcart's figure in Dr. Hooker's possession.

Wild in Sikkim-Himalaya, at the height of 4000 feet — J. D. Hooker, (v. s. sp et ic. pict. Cathcart.)

2. IONE VIRENS Lindl.

I. foliis oblongis planis utrinque obtusis scapo duplo brevioribus, bracteis ovatis acutis membranaceis distantibus ovario longioribus, sepalis lateralibus connatis, petalis acutis integerrimis, labello oblongo serrulato in apicem longum crassum teretem striatum producto.

Dipodous genus Griffith Not., p. 405; Ic. t. 328. fig. 1.

Readily known by its broad oblong leaves, about four inches long by one and a quarter wide, and by its distant bracts. The scape would seem always to be nodding. Griffith thus speaks of it: Leaves lively green. Scape fuscous below, becoming purple among the flowers, and green at the apex of the newer parts. Bracts whitish with purple veins. Lateral sepals white in the middle, with greenish edges, the white parts veined with purple. Petals purple and sanguine. Pollen-masses light yellow. Pseudobulb shrivelled.

Wild in the Himalaya, in the Mishmee hills—Griffith. (v. s. sp. comm. b. Griffith.)

2. IONE FUSCO-PURPUREA Lindl.

I. foliis angustis obtusiusculis scapo multo brevioribus, bracteis ovatis, acuminatis imbricatis ovario aequalibus, sepalis lateralibus liberis, petalis acutis, labello ovato cordato concavo membranaceo in apicem crassum teretem producto.

Dipodous genus Griffith Not. B. 405; Ic. t. 327. fig. 1.

Related to the last in the form of its lip, which is however more cordate, thinner at the edge, and with a more distinct tapering fleshy apex, but the bracts are not carinate, imbricate each other when young, and hardly reach beyond the ovary. (Peduncles light yellowish green. Ovary green. Pseudobulbs blackish. Sepals and petals light fuscous veined with bright purple. Lip the same, but less veined; apex tongue-shaped, light fuscous green on the sides, purplish at the edge. Bracts membranous. — Griffith.)

Wild in the Himalaya, trees on Thumathya in the Mishmee mountains — Griffith, (v. s. sp. comm. b. Griffith.)

4. IONE PALEACEA Lindl.

I. foliis angustis obtusiusculis scapo subaequalibus, bracteis angustis ovalibus obtusis imbricatis, adpressis, ovario subaequalibus, sepalis lateralibus connatis, petalis acutis serrulatis, labello ovato serrulato membranaceo in apicem longum crassum teretem producto.

Very like I. fusco-purpurea, but the scape is little longer, than the leaf, the bracts are long, narrow, close-pressed, and membranous, and the petals as well as labellum are distinctly serrated. Lip evidently purple. The flowers are twice as long, and much more membranous.

Wild in the Himalayas, Darjeeling — Griffith (v. s. sp. comm. b. Griffith.)

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§. 2. Angustifoliae, bracteis membranaceis.

5. IONE KHASIANA Lindl.

I. foliis lineari-oblongis emarginatis scapo filiformi aequalibus, spica flexuosa, bracteis laxis angustis distantibus floribus aequalibus, sepalis lateralibus connatis, petalis rotundatis serrulatis, labello panduriformi-rhombeo obtuso medio serrato antice integerrimo lineis 2 elevatis secus medium.

Dipodium Khasiyanum Griffith Not. p. 354; Ic. t. 327. fig. 2.

A plant from three to four inches high, forming close tufts. Flowers small, with the two lateral sepals completely or nearly united. Sepals white, streaked with violet, lip deep violet with two white streaks, according to a drawing of Mr. Cathcart's.

Wild in the Khasia hills, 5—7000 feet — Hooker and Thomson; on trees at Nungbree, Churra, Myrung, Amwee — Griffith, 1219. (v. s. sp.)

6. IONE BICOLOR Lindl.

I. foliis lineari-oblongis emarginatis scapis filiformibus duplo longioribus, spica flexuosa, bracteis laxis floribus brevioribus, sepalis lateralibus semi-connatis, petalis rotundatis serrulatis, labello panduriformi serrulato in apicem crassum teretem producto.

Sunipia bicolor LO. n. 2. Sert. Orch. frontisp. fig. 5.

A smaller plant, than the last. Scapes very short-stalked, not half the length of the leaves. Sepals white, acuminate, with three purple veins at the base. Petals white. Lip dark purple, with the point protruding in the form of a dagger-blade; in the Sikkim plant shorter than in that from Darjeeling.

Wild in Nepal — Wallich; Sikkim — Himalaya at 4—6000 feet — J. D. Hooker; Darjeeling — Griffith (v. s. sp.)

Obs. En descriptio ex Serto: Small patches of ovate pseudobulbs about as large as marbles, each of which is terminated by a narrow oval slightly stalked obtuse leaf. 3''. Racemes are erect, rather longer than the leaves, originate from the base of the pseudobulbs; they bear about 9 small ringent flowers, arranged upon a flexuose, slender rhachis, each of which is sustended by a lanceolate, colourless bract, larger than the short obovate ovary. The sepals are white, slightly streaked with purple, ovate-lanceolate; 2 lateral ones being narrower and rather larger than the others, placed parallel with each other below the lip, and slightly adhering by their margins. Petals white, ovate, bluntish, rather more than twice as short as the sepals, with a faint purple streak at their base. Labellum deep purple, articulated with a very short foot of the column. Its general outline is cuneate; in the middle it is flat and fleshy and traversed by a sunke(?) line, at the margin it is foveated, at the apex rounded and emarginate; just above the base there is on each side a small erect auricle. All these things are described from the Indian drawing.

7. IONE CANDIDA Lindl.

I. foliis lineari-oblongis emarginatis scapis filiformibus aequalibus, spica subflexuosa, bracteis floribus brevioribus, sepalis omnibus liberis, petalis ovatis acutis ciliato-fimbriatis, labello ovato basi fimbriato versus apicem serrulato in apicem longum crassum producto.

Flowers pure white.

Wild on the Khasia Mountains, at 5—6000 feet — J. D. Hooker and R. Thomson.

1438ᵇ/. POLYSTACHYA Hook.

Exot. Fl. 103. (LO. p. 72. sub Malaxideis, hinc Endl. 1366). — Epiphora Lindl.

1. POLYSTACHYA GALEATA Rchb. fil. Mss. *Dendrobium galeatum* Sw.! *Bolbophyllum galeatum* L. O. 57. Huc: *Polystachya grandiflora* Lindl. in B. Mag. 3707:

Pseudobulbis parvis monophyllis, folio lineari-oblongo carnoso, pedunculo terminali subunifloro, flore recto (non resupinato), sepalis mucronatis; lateralibus quadruplo majoribus, petalis minutis oblongo-spathulatis, labello carnoso trilobo, lobo intermedio cordato acuto.

Labellum viridi-album, perigonium viride, rubro maculatum. — Sierra Leone.

2. POLYSTACHYA REFLEXA Lindl. Bot. Reg. XXVII. (1841.) Misc. 43:

Pseudobulbis conicis subcompressis annulatis, foliis —, scapo subclavato apice racemoso, sepalis expansis sub apice emarginato mucronatis lateralibus maximis, labello pandurato medio crenulato genuflexo pulvinato apice dilatato membranaceo.

A native of Sierra Leone, where it was found by Mr. Whitfield. It flowered in February in the garden of Chiswick House. Its leaves —. The flowers are white with a faint tinge of pink, and spread flat, so as to look at first sight very unlike those of a Polystachya. The lip is slightly tinged with green, abruptly bent back in the middle, and below the bend furnished with a bright yellow cushion of the most curious jointed hairs, which are arranged so compactly, that the whole seem to form one solid mass.

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3. POLYSTACHYA OTTONIANA Rchb. fil. in Otto Hamb. Gtz. XI. p. 249. Bpl. III. 217:

Aff. P. grandiflorae: racemosa? foliis lineari-ligulatis geminis ternisve, pedunculo ancipiti, labelli trilobi lobis lateralibus rectangulis, lobo medio retuso, carinis carnosis a basi in discum sparse puberulo farinaceum.

Pseudobulbus maturus pyriformis nitidissimus laete viridis, vagina lacera amictus. Folia lineariligulata, bipollicaria, seu longiora, apice inaequali acuta nunc violaceo marginata. Vaginae infimae nunc fusco marginatae. Pedunculus anceps — in specimine misso uniflorus, forsan (ex bracteis fatuis) demum racemosus; viridis, puberulus. Bracteae minute squamatae. Ovarium pedicellatum purpureoviolaceum, puberulum. Flos in specimine transmisso anticus. Sepala triangula, lateralia apice paulo deorsum curvula, lactea; basis sepalorum extus, limbus sepali dorsalis, nervi medii sepalorum lateralium purpurei. Tepala cuneato oblonga acuta, subbreviora, angustiora; latere inferiori medio obtusangula. Labellum flabellatum, supra descriptum; carinis ac disco antico xanthinis. Gynostemium elevatum linea antice angulata supra basin xanthinam atropurpurea. Anthera purpurea. Pollinia semiobpyriformia, postice biloba sessilia in lamina cordata. Flos illi Aganisiae vix minor. Diese niedliche Orchidee ist geradezu hübsch. Die zolllangen Scheinknollen sind birnenförmig mit silberfarbigen Scheiden. Zwei bis drei lineale feste Blätter. Auf zweischneidigem dünn behaartem Blüthenstiel eine hübsche Blüthe: so gross und so gefärbt wie die der lieblichen Aganisia; milchweiss mit Purpur eingefasst und gestreift, schön goldgelb auf der Lippe. — „Geruch einer verblühten Hyacinthe." Sie ist jedoch ein spröder Blüher, da sie seit 1847 erst 1855 wieder blüht. Ihr Vaterland ist nicht sicher bekannt.

Obs. Serius cognovi, esse Pleurothallidem capensem „Sonder Mss." Lindleyumque illustrem hoc Londini docui. Inde tantum ex verbis „summum jus, summa injuria" intelliges, ill. Lindley in Proceedings of the Linn. Society May 1862 p. 130 attulisse: „It has, however, the habit of Polystachya capensis of Sonder (P. Ottoniana Rchb. fil.)"

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4. POLYSTACHYA EXTINCTORIA:

Labelli laciniis lateralibus semifalcatis antrorsis lacinia media transversa subemarginata, toto disco a basi angusta labelli in basin laciniae mediae furfuraceo, mento angustiusculo elongato, extinctoriiformi, curvato, per lineam mediam emarginato.

Cranichis luteola Sw.? In Jamaica insula.

5. POLYSTACHYA NANA:

Labelli laciniis lateralibus ligulatis productis retusiusculis, lacinia antica semiovata, toto disco per totam longitudinem furfuraceo, mento obtusissimo omnino non extinctoriiformi. Encyclia nana Pöpp. Endl. t. 113. A! Analysae confusae! Caespitosa. Radices adventitiae funiformes validae.

Caulis basi tumidus, vaginatus, di- — triphyllus. Folia ligulata apice minute biloba. Summa folia spathacea. Pedunculus anceps parcissime minuteque puberulus. Bracteae lanceae aristulatae flores aequantes perigonii clausi subglobosi. —

Peruvia subandina in arborum ramis sylvarum editiorum. Jan. 1830. (Cuchero). Pöppig! Ex parvulis! (Juxta typos).

6. POLYSTACHYA ZEYLANICA Lindl. Bot. Reg. XXIV. (1838). Misc. 144:

Caulescens, foliis oblongo-lanceolatis, panicula racemosa ramis elongatis, floribus glabris, sepalorum basi triangulari, labelli lobo medio rotundato apiculato disco furfuraceo in medio nudo calloso, capsula inter costas reticulata.

Dendrobium polystachyum Thouars O. Afr.

In both these plants the disk of the labellum is covered with a fine frost-like mealiness: which is removed by the least touch. This mealiness is a curious modification of the hairs found in other plants. When undisturbed it consists of threads with egg-shaped joints, which are filled with air; the surface of each joint is marked with wavy oblique striae, and the interior uniformly contains a nucleus, to which there appears to belong a circulating apparatus of the same nature, as that in the hairs of Tradescantia and other plants. I have not however succeeded in actually observing any circulation. But the slightest touch suffices to destroy the cohesion between the joints of these singular necklace-shaped bodies, so that when they are placed on the field of the microscope the latter appears as if covered with the eggs of some insect; it is only, when they are removed from the labellum with great care, that their real articulated structure, and their analogy with such hairs as those of Tradescantia is made out.

Obs. Huc forsan Polystachya luteola Hook.? Ex II. 103 (1825). — Definienda P. Zeylanica: labelli medio trifidi laciniis lateralibus acutangulis, lacinia antica semiovata lobulata, mento triangulo obtusato. R. fil.

7. POLYSTACHYA LUTEOLA Lindl. Coll. Bot. 20. (an Hook. Ex. II. 103?).

Labelli angusti laciniis lateralibus dentiformibus abbreviatis, lacinia antica semiovata crispula, toto disco multifurfuraceo, linea elongata callosa per medium, mento obtusangulo. — Haec est vulgatissima in Antillis, Surinamo etc. Rchb. fil.

Videtur omnino Lindleyana Coll. Bot. 20. (1821). Peraffinis est Polystachyae zeylanicae, quae eget jugo illo characteristico carinato et gaudet labello latiori, lacinia antica breviori.

Polystachya luteola Hook. Focke Tidsch. Wis. Nat. Watsch. 203:

Herba epiphyta caulescens. Caulis basi incrassatus ibique callosus. Folia oblongo lanceolata, acuta, plicata, multinervia, basi vaginantia, disticha, scapo breviora, apice recurva. Scapus composito spicatus, vel spica composita, caulem terminans, compressa, erecta, vaginata. Spiculae 1—3 pollicares, oblongae, remotae, densiflorae. Flores minuti, conferti, luteo virides, glabri, leviter adnati. Alabastrum trigonum. Sepala patula, lateralia cum basi producta columnae connata, basi obliqua, acuminata. Petala multo angustiora, linearia, subspathulata, conniventia, apice tantum recurva. Labellum posticum, cum pede longe producto columnae articulatum, trilobum, album lobo medio majore, plicato, acuminato, subito reflexo, lobis lateralibus falcatis conniventibus; disco ad medium calloso, a basi ad apicem usque dense glanduloso. Columna brevis, semiteres, in ovarium resupinata clinandrio utrinque excavato ad pollinia recipienda. Anthera subconica bilocularis septo interrupto. Pollinia 4, per paria cohaerentia, subrotunda, compressa, flava. Ovarium sulcatum, glabrum. Habit. in sylvis ad rivum Para, in ramis arborum. Mart. April.

Huc: *Polystachya luteola* Hook. α. angustifolia A. Rich. in Ramon de Sagra 246. Caule compresso subancipiti basi incrassato simplici glabro; foliis 2—3 inferioribus vaginantibus elliptico oblongis obtusis coriaceis, nunc caule dimidio brevioribus, nunc subaequalibus; floribus parvulis luteolis brevissime pedicellatis, nunc spicam simplicem, nunc spicas 2—3—4 alternas efformantibus, fructibus oblongis sexcostatis.

Crescit in cortice arborum, nec non inter muscos et in detritis foliorum elapsorum in diversis Cubae partibus. (Ramon de la Sagra. J. Maria Valenzuela).

8. POLYSTACHYA FOLIOSA. Huc: *Stelis foliosa* Hook. Ann. of Nat. Hist. Vol. II. p. 330:

Nana, foliis subtribus lineari-oblongis, scapo folio breviore, spica subcompacta, floribus subcernuis, petalis lingulatis, sepala subaequantibus, labello trilobo, medio dense glanduloso.

Habit British Guiana, whence it was introduced in a living state by C. S. Parker Esq. — Column much shorter than the perianth, thick, fleshy, rhomboid. Anther hemispheric.

Huc: *Stelis foliosa* Hook. Focke in v. Schld. B. Z.: Folia plurima oblique emarginata, plicata. Scapus anceps, composito spicatus, vaginis griseis vestitus, spicis teretibus erectis brevibus viridibus. Flores bracteis minutis acuminatissimis viridibus suffulti. Capsula oblonga. Juni. Para.

Huc: *Polystachya Weigelti* Rchb. fil. in Linnaea XXV. 230:

Caulibus secundariis diphyllis, foliis lineari-lanceolatis, curvatis, apice vix attenuatis, subtiliter tridentatis, rhachi ancipiti, vaginis ancipitibus, membranaceis (nec hyalinis), elongatis, ochreatis, apice libero acutis arctissime vestito, rhacheolis vaginas basi perforantibus secunde divaricato-nutantibus, plurimifloris, minutifloris, minutissime puberulis, bracteis a basi triangula acuminatis brevissimis, floribus inversis, perigonii phyllis externis ovatis acutiusculis brunneis, phyllis lateralibus internis linearibus obtusiusculis aequilongis, labello a basi lato cuneato medio trilobo, lobis lateralibus rhombeis, divaricatis, lobo medio producto retuso furfuraceo, callo obtuse lobulato in ima basi furfuraceo.

Obs. 1. Nomen Hookerianum restitui licet planta sub alio ordine publici juris facta fuerit, quod vulgo non faciendum ratus. Sed cum ill. Hooker noster iconem dederit, plantaque tum temporis pro Malaxidea habita fuerit, satius duxi.

Obs. 2. Forsitan etiam Jamaicam incolit. Inter Wullschlegelianas Orchideas jamaicenses hanc reperi nec lapsu crediderim incidisse inter illas.

9. POLYSTACHYA PURPUREA Wight Ic. V. (1851). N. 1679:

Spike panicled, leaves coriaceous, linear oblong, obtuse, emarginate, shorter, than the scape; flowers and ovary glabrous, lip pubescent within, gland of the pollen scutelliform, orbicular, caudicula short, capsules ovoid. Flowers purplish or rather perhaps dark lilac, lip much paler.

On the top of Jyamally, a high hill about 3000 feet elevation, with the following on branches of trees. Juny and on several subsequent occasions from the same range of hills. Wight Ic. VI. 1851.

Obs. Specimina mea Wightiana hanc concedunt diagnosin: labelli latiusculi laciniis lateralibus dentiformibus abbreviatis, antrorsis, lacinia media semioblonga, toto disco late furfuraceo, mento rectangulo. Rchb. fil.

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10. POLYSTACHYA ZOLLINGERI Rchb. fil. Bonpl. V. 39.

11. POLYSTACHYA WIGHTII Rchb. fil. Huc: *Polystachya luteola* Hook Wight Ic. V. I. (1851) 1678:

Spike panicled, leaves oblong, lanceolate, many-nerved, shorter than the scape; flowers and ovaries glabrous. Flowers pale yellow.

Jyamally Hills near Coimbatore, on branches of trees, flowering Aug. Sept. — Pulney mountains during the rain. — Pollen Vandeae!

WALPERS.

ANNALES BOTANICES

SYSTEMATICAE.

TOMI SEXTI

FASC. V.

AUCTORE

DR. CAROLO MUELLER BEROL.

LIPSIAE.

SUMPTIBUS AMBROSII ABEL.

1863.

1 Thlr. 6 Ngr.

Jede Zusendung oder Bemerkung die **Annales botanices systematicae** ... wird von dem Herausgeber mit größtem Danke aufgenommen und ... [illegible]

Obs. Sic definienda: labello valde transverso, lobis lateralibus a lamina medio porrectis obtusangulis, lobo medio triangulo emarginato, disco furfuraceo, jugo cariniformi a basi in basin disci, mento obtuse acutangulo. Ill. Wight grato animo dicata. Rchb. fil.

12. POLYSTACHYA CARACASANA Rchb. fil. Bonpl. II. 15:

Caule ancipiti dense arcteque paleaceovaginato, vaginis imbricantibus, ramulis lateralibus abbreviatis, summo elongato, omnibus polyanthis, bracteis squamiformibus cuspidatis, ovaria haud dimidio aequantibus, sepalo summo ovato acuto, s. lateralibus triangulis acutis, tepalis linearibus acutis, labello basi subcordato, medio obtuse trilobo, lobis lateralibus omnino obtusatis, medio porrecto ligulato obtuse bilobo, callo rotundo in basi.

Blüthen so gross, wie bei *P. cerea* Lindl. Stiel spannenhoch. Die Gestalt der Lippe zeichnet diese Art sogleich von den verwandten Arten aus. Caracas. Wagener.

Huc: *Encyclia polystachya* Pöpp. Endl. II. 113! (Analyses confusae!)

Huc: *Polystachya nana* Kl. (1853). Mss. in Semin. hort. Berol. 1853. N. 5:

Pseudobulbis parvis ovatis, apice attenuatis, squamis vaginantibus aridis vestitis, bifoliatis, foliis oppositis parvis anguste oblongis, apice subobtusis, inaequalibus recurvatis unicostatis, supra canaliculatis, in petiolum longum attenuatis; scapo terminali brevi, minutissime puberulo, articulatim deorsum attenuato; floribus in apice congestis minutis sessilibus e flavido-viridibus; perigonii foliolis semipellucido-punctatis, exterioribus ovatis acutis, interioribus spathulatis subacutis brevioribus; labello inferne trilobo, lobo medio aut acuto aut bidentato recurvo; columna perbrevi, intus excavata.

Planta erecta, bipollicaris. Pseudo-bulbi 4 lineas longi. Folia sesquipollicaria, 4 lineas lata. Scapus 7—8 florus. Flores flavo-virides, lineam longi. Cl. Wagener misit specimina sub N. 38. e Venezuela anno 1851. Floruit in horto Berolinensi M. Octob. 1853. (Kl.)

13. POLYSTACHYA ESTRELLENSIS Rchb. fil. Linnaea XXV. 231:

Caulibus secundariis elongatis (—''), basi pseudo-bulboso-incrassatis, vaginatis, paucifoliis, foliis 4—6, oblongis, acutis (—9'' longis, 1'' latis); rhachi ramulosa, rhacheolis multifloris, bracteis ovatis acutis (0,5'' longis, basi 0,3''' latis), ovariis brevissime pedicellatis (2''') brevioribus, perigonii phyllis lateralibus ovatis acutis (1''' longis, basi 0,9''' latis); lateralibus internis ligulatis obtusis, margine superiori nunc crenulatis, semipenninerviis (sc. nervulis abbreviatis marginem non attingentibus), aequilongis (0,3''' latis), labello a basi cuneata angusto unguiculato in laminam trilobam explanato, calloso, callo carinaeformi margine libero superiori prope lunato a regione antebasilari ad discum labelli, lobis lateralibus abbreviatis, medio lobo latiori retuso emarginato crenulato (1,1''' longo, medio 1''' lato), gynostemio brevissimo truncato.

14. POLYSTACHYA JUSSIEUANA:

Labelli lati laciniis lateralibus triangulis antrorsis, lacinia antica reniformi crispula, disco furfuraceo, tuberculo in basi antrorsum in carinam exeunte, mento obtuse acuto, pedunculo hispidulo. — Madagascar. Ex herb. Juss.!

15. POLYSTACHYA CEREA Lindl. Bot. Reg. XXVI. (1840). Misc. 208:

Pseudobulbis ovatis, foliis oblongo-linearibus undulatis, racemo simplici obtuso brevioribus, floribus cernuis, labelli trilobi pone basin callosi per axin pubescentis lobis lateralibns nanis, intermedio obtuso undulato.

Imp. from Oaxaca by Messrs. Loddiges (265.) The flowers, when full blown, have the colour and texture of old wax; they are distinctly drooping and arranged in a

very dense obtuse raceme about an inch long. In habit, size, and general appearance the species bears much resemblance to the Encyclia nana of Pöppig, which like E. polystachya of that author, is apparently a Polystachya, notwithstanding the manner in which the pollen masses are represented, about which I think there must be some error. In this plant there is a pair of pollen masses, excavated at the back and attached to a short caudicula and small gland.

16. POLYSTACHYA PAULENSIS Rchb. fil. Mss.:

Labello trifido, laciniis semioblongis, obtusis, lateralibus subbrevioribus subantrorsis, mento obtusissimo. Plantula pusilla habitu et magnitudine Polystachyae nanae Rchb. fil.

In arboribus ad Hyta Provinciae S. Pauli. v. Martius. (Vid. in herb. Monac.)

17. POLYSTACHYA MASAYENSIS Rchb. fil. Bonpl. III. 217:

Aff. Polystachyae cereae Lindl. foliis lineariligulatis, racemo simplici nunc aequalibus, pedunculo ac ovariis puberulis, labelli trilobi basi ima furfuraceocallosi lobis lateralibus rotundatis, lobo medio producto retuso.

Planta tenuis basi pseudobulbosa. Folia lineariligulata — tripollicaria. Pedunculus pollicaris—quadripollicaris basi vaginis acutis ancipitibus scariosis 2—3 vestitus, superne dense spicatus. Bracteae triangulae aristula brevissima. Sepalum impar lanceolatum; sepala lateralia triangula; tepala linearia acuta. In summo monte Masaya. Am. centr. Oersted.

Var. elatior Rchb. fil. Bonpl. III. 217: Specimen foliis ligulatis quadripollicaribus et pedunculo quinquepollicari ramuloso, notis tamen speciei genuinae. Vultus Polystachyae estrellensis Rchb. fil. et caracasanae Rchb. fil. In Monte Masaya 3000'. Am. centr. Oersted.

18. POLYŚTACHYA CLAVATA Lindl. Bot. Reg. XXVIII. (1842). Misc. 71:

Foliis lineari-oblongis obtusis recurvis canaliculatis, paniculae brevis strictae spicatae ramis clavatis, labelli carnosi lobo medio emarginato crenato lateralibus brevibus acutis, disco farinoso basi convexo.

Inconspicuous species from Beliza. Loddiges. Flowers pale yellow and small. The branches of a short panicle are fleshy, club-shaped, studded with sessile flowers.

19. POLYSTACHYA AFFINIS LO. 73. Bot. Reg. 1839. (XXV.) Misc. 44:

Flowers with Loddiges, who imported it from Sierra Leone. Extremely different from P. puberula, of which I once thought it might be a variety, and has larger flowers, than any of the racemose species of the genus. Sir W. Hooker has observed a gland and caudicula in my Polystachya macrantha (Bot. Mag. t. 7307.), which is probably the Dendrobium galeatum of Swartz; I had previously noted the same thing in P. ramulosa (Bot. Reg. 1838. Misc. 144) and I find a similar structure in the present species; it is therefore probable, that the genus Polystachya should be placed in Vandeae, among the genera belonging to which subdivision a better station may be found for it than next to Dendrobium.

20. POLYSTACHYA BRACTEOSA Lindl. Bot. Reg. XXVI. (1840.) Misc. 102:

Foliis obovato-oblongis acutis in petiolum carinatum angustatis, racemo tomentoso oblongato cernuo basi ramoso, bracteis foliaceis acuminatissimis squarrosis, sepalis villosis, labelli ciliati trilobi per axin medium villosi lobo medio ovato acutiusculo.

A drooping Polystachya, with orange coloured flowers, imported from Sierra Leone by Messrs. Loddiges. Its leafy tapering squarrose bracts and downy flowers readily distinguish it.

Bot. Mag. 4161: Pseudobulbis subrotundis compressis aggregatis, folio unico petiolato oblongo-ovato acuto, racemo e summitate petioli nutante pubescente pedunculoque bracteato, bracteis (infima foliacea) lanceolatis acuminatis concavis, inferiori-

bus florem aequantibus vel superantibus, petiolis obovato-oblongis glabris, labello lato-oblongo revoluto medio longitudinaliter villoso, lobo medio subrotundo. Flores flavi, sepala basi brunnea, labelli lobi laterales intus brunnei.

21. POLYSTACHYA RAMULOSA Lindl. Bot. Reg. XXIV. (1838.) Misc. 142:

Ebulbis, foliis .... —, scapo paniculato, floribus glaberrimis, sepalorum basi conica elongata, labello cuneato trifido apice carnoso margine involuto;, lobis acutis intermedio minore, disco plano imberbi.

Sierra Leone, whence it was imported by Messrs. Loddiges, who flw. it in Septb. 1838. It is a small green flowered plant, with the habit of Polystachya luteola, but more branched, and with branchlets at the base of its ramifications. The smooth flowers, prolonged at the apex (that is to say, at the base of the sepals) into a long cone, and the wedge-shaped naked lip, distinguish this from the other species previously known. The apparatus connected with the pollenmasses is very remarkable; in this plant the masses are two waxy bodies obliquely divided half-way into two very unequal lobes, and adhering to a long white wedge-shaped separate process, which has all the appearance of the caudicula of a Vandeous genus, and which is moreover attached to a minute separable gland; a trace of this structure also exists in P. luteola, and is probably what Sir W. Hooker saw when making the drawing of Ex. Fl. At first sight a fact like this would appear either to weaken the value of the distinction by which O. pl. of the Vandeae are separated from those of the Malaxid. division, or to render it necessary to transfer Polystachya from the latter to the former. But upon an attentive examination of the structure of the process in question, it is seen, that it is not a cartilaginous elastic strap, adhering to a hard gland with a well defined outline, but a collection of large cells, loosely cohering, very convex, and filled with air; while the representation of the gland is a small hemispherical succulent mass, to which the cellules adhere. This process may therefore be regarded as a mere modification of the shapeless viscid matter to which the pollenmasses of many Malaxideous genera are attached.

22. POLYSTACHYA PUBESCENS Rchb. fil. Huc: *Epiphora* Lindl. in Comp. Bot. Mag. N. 19. p. 201:

Perianthium explanatum, labello postico. Sepala libera, lateralia aequalia. Petala forma diversa. Labellum carinatum, trilobum, cum columna sigmoideo-unguiculatum. Columna dorso prona, inversa, stigmate verticali, margine trituberculato, basi paulo producta et cum labello articulata. Anthera unilocularis. Pollinia 4, caudiculae lineari affixa.

Herba epiphyta, Polystachyae facie, subbulbosa. Racemi terminales.

Epiphora pubescens Lindl. l. c.:

Super arbores inter Kovi et Kaprivier, also near Graham's Town Burchell. Epiphyta palmaris. Folia bina, oblongo-linearia, plana, apice paulo obliqua. Racemus terminalis, folio longior, 7—8florus, cum ovariis pubescens. Flores verosimiliter lutei. Sepala lateralia lanceolata, acutissima, nullo modo obliqua: supremum oblongo-lineare, concavum apiculatum. Petala paulo breviora, plana, obovata, obtusissima. Labellum pagina superiore nuda.

I hardly know, where to station this very distinct genus. Its habit is that of Polystachya, but it belongs to Vandeae. Perhaps it had best be placed near Maxillaria, on account of the protracte base of the column; but there is no obliquity whatever in the lateral sepals. To Cymbidium it likewise approaches, but its labellum and very curious column distinguish it from all the members of that heterogenous genus. It was found by Mr. Burchell in the Caffre Country and is N. 3590 of his Herbar.

Lindl. Bot. Reg. XXVI. (1840.) Misc. 108: Originally found by Dr. Burchell in the Caffre country, afterwards collected by Drége, has lately flowered with Mesrrs. Loddiges, who imported it from Delagoa Bay. It grows about 6" high, and has an

ancipitous flexuose scape, terminated by a few fragrant bright yellow flowers streaked with red. It approaches very near to the genus Polystachya, next to which among Vandeae it must be placed. The inside of the little tridentshaped lip is bearded with long hairs.

Species exclusae.

Forsan Hexadesmia: *Polystachya minuta* Rich. et Gal. Ann. sc. nat. 1845. p. 27. Minima pseudobulbo ovoideo-oblongo, sulcato, 1-phyllo; folio lineari apice obtuso, floribus minimis in axilla folii solitarii, labello sessili ovali obtuso. Ibid. p. 29. Mexico.

Sine dubio *Chloidia polystachya* Rchb. fil. (*Serapias et Neottia polystachya* Sw.) est *Polystachya membranacea* A. Rich. Ramon Sag. (*N. flava* Sw. = *Chloidia flava*!)

Obs. Etiam in Florida videtur occurrere Polystachya, forsan luteola, nisi Hook., tamen Lindl. Vestigia quaedam, a domino Cabanis (ornithologo?) exstabant in Musaeo Berolinensi. Cum idem *Epidendrum tampense* Lindl. legerit, res mihi sincera visa.

1440. EULOPHIA *RBr.*

Eulophus: B. R. VII. (1821.) tab. 573. sub *Lissochilo specioso* RBr.

„This genus in affinity comes nearest to those plants of South Africa at present referred to Limodorum and Cymbidium, namely Limodorum barbatum, triste, longicorne, and perhaps also hians of Thunberg (not however Satyrium hians Linn., which seems to be a Disa), Cymbidium pedicellatum and aculeatum. These along with several Indian species, especially L. virens, carinatum and perhaps epidendroides form a genus (Eulophus), related on the one hand to Dipodium (vid. Prodr. flor. nov. holl. p. 330), and essentially agreeing with Lissochilus in the structure of anthera, but sufficiently different from it in its trilobed crested labellum, which is neither cordate, nor connected at base with the column. In both these characters, Lissochilus equally differs from Angraecum of M. du Petit Thouars, which has also an elongated spur and a considerably different habit.

Eulophia RBr. Bot. Reg. VIII. (1832) t. 686. „for the outline of the genus and enumeration of the species we refer to Mr. Brown's observations on Lissochilus speciosus, vol. 7. fol. 578. of this work; where the name is written „Eulophus", and has been now altered in the termination on the suggestion of its author.

Lindl. B. M. Comp. N. 19, p. 201: Sect. Desciscentes. In Gen. et. Sp. Orch. this section is characterized as having equitant leaves. I now find, that although in some species the leaves are truly so, yet that in many others, they are only folded together and carinate.

1. EULOPHIA LISSOCHILOIDES Lindl. Comp. Bot. Mag. N. 19. 203:

Foliis lineari-lanceolatis suberectis scapo brevioribus, racemo laxo 8—9floro, bracteis lanceolatis acuminatis patentibus, sepalis lineari-oblongis obtusis, petalis obtusissimis latioribus brevioribusque, labello trilobo laciniis lateralibus membranaceis ovatis, intermedia oblonga, subcuneata retusa carnosa, venis tribus lacerocristatis, calcare conico incurvo.

(Hb. Burchell No. 6764). In agro Zwellendam, prope Zoetemalks Rivier.

2. EULOPHIA DREGEANA Lindl. Comp. Bot. Mag. 19. 202:

Foliis ensiformibus acuminatis recurvis longitudine scapi, vaginis scapi laxis foliosis imbricantibus, racemo multifloro denso, bracteis lineari-lanceolatis ovariis aequalibus, petalis oblongis tenuioribus acutis, labello oblongo trilobo lobis lateralibus rotundatis intermedio ovato plano venis disco cristato lamellatis calcare brevissimo ventricoso.

Prope Vischrivier in graminosis, inter Keiskamma et Omsamcaba, vulgaris. Drege. Rhizoma crassum, carnosum. Scapus pedalis. Folia parum breviora, versus basin unciam lata. Vaginae circiter 5, laxe cucullatae, acuminatae, striatae, verosimiliter foliaceae, internodiis multo longiores ideoque invicem imbricantes. Racemus palmaris. Flores magni, speciosi, sepalis pollicem longis, verosimiliter herbaceis; petala colorata.

This is by far the finest of all the Cape Eulophias, except E. parvilabris; it may follow E. barbata.

3. EULOPHIA PLATYPETALA Lind. Comp. B. Mag. 19. 202:

Foliis linearibus ensiformibus recurvis scapo triplo brevioribus, racemo oblongo 7—8-floro, bracteis membranaceis acuminatis cucullatis pedicellorum longitudine, sepalis oblongis acutis, petalis fere triplo latioribus aequilongis obtusis, labelli trilobi laciniis lateralibus ovatis planis, intermedia retusa undulata ramentaceo-cristata, calcare cylindraceo obtuso ovario subaequali.

(Hb. Burchell, N. 6611). In agro Zwellendam, prope Zoetemalks Rivier.

Vix pedalis. Scapus vaginis tribus distantibus acuminatis. Folia rigida.

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4. EULOPHIA PARVILABRIS Lindl. Comp. Bot. Mag. N. 19. 201:

Foliis lanceolato-ensiformibus longitudine scapi laxis membranaceis striatis, racemo multifloro, bracteis oblongo-lanceolatis striatis, demum revolutis ovariis longioribus, sepalis lanceolatis acutis, petalis oblongis obtusis longioribus, labello sepalis duplo breviore complicato leviter trilobo ovato membranaceo, lamellis 2 parvis pone basin, calcare obtuso ovario duplo breviore.

Inter Omsamwubo et Omsamcaba.

Verosimiliter tuberosa, ut E. ensata. Bipedalis, robusta, vaginis scapi internodiis paulo longioribus. Folia sesquipollicem lata. Flores speciosissimi 14—15; sepalis verosimiliter herbaceis, petalis duplo latioribus et paulo longioribus. Labellum membranaceum in unico flore, quem vidi posticum, an semper? margine nullo modo crispo aut plicato; venae omnes sunt immersae nec ulla adest appendix paginae, nisi lamellae 2 parvae breves truncatae versus faucem calcaris.

A noble species of which however I have seen only one expanded flower, the petals of which, in their dried state, are 1½″ long.

5. EULOPHIA CLAVICORNIS Lindl. Comp. Bot. Mag. N. 19. 202:

Foliis lineari-ensiformibus recurvis scapo paulo brevioribus, racemo 5—6floro, sepalis oblongo-lanceolatis acutis, petalis oblongis mucronulatis duplo latioribus, labello obovato obtuso trilobo; lobis lateralibus truncatis planis, intermedio crispo ramentaceo-cristato, calcare clavato ovario paulo duplo breviore.

Katberg, Drege.

At one time I took this to be Satyrium hians of Linnaeus; but the specimen of that species in the Linnaean herbar is either Disa lacera of Thunberg or some very nearly allied plant; so that the Eulophia hians of Sprengel has to be expunged from the system. I am, however, by no means certain, that Limodorum hians of Thunberg is not a synonym of this species.

6. EULOPHIA EMARGINATA Lindl. Comp. B. Mag. N. 19. 202:

Foliis lineari-ensiformibus scapo triplo brevioribus, racemo subsecundo multifloro, sepalis lanceolatis acuminatis, petalis paulo brevioribus obtusis, labelli trilobi lobis lateralibus ovatis intermedio obovato emarginato medio dense ramentaceo-barbato, calcare filiformi flexuoso ovario paulo breviore.

Inter Sobiloh et Windvogelberg. Drège.

Dist. from E. clavicornis by its very different lip, more expanded and larger flowers, narrower petals and longer spur.

7 EULOPHIA OVALIS Lindl. Comp. Bot. Mag. N. 19. 202:

Foliis lineari-ensiformibus scapo parum brevioribus, racemo multifloro, sepalis lanceolatis acutis, petalis paulo brevioribus obtusis, labello ovali plano leviter trilobo medio parce barbato, calcare conico obtuso.

Ado, collibus graminosis Drege.

Also allied to E. clavicornis, but with a very different lip, which is flatter, thinner, and less bearded, than in any of the Cape species, except E. cochlearis and parvilabris. A span high.

8. EULOPHIA TRISTIS Spreng. Syst. Veg. III. 730: Lindl. Bot. Mag. Comp. Mag. N. 19. 202: Zuurebergen, inter Bethelsdorp et Vanstaadesnivier. Drege.

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9. EULOPHIA MICRANTHA Lindl. Orchid. 184. — Comp. Bot. Mag. N. 19. 202:

Inter Kuge et Zontagriviers in planitie calcarea: inter Bethelsdorp et Vanstaadesrivier. — Drege.

The lip of this species has a deep membrane something like the ligule of a grass, arising from the orifice of its short spur; it is probably analogous to the fleshy ridge found in a similar part in Zygopetalum.

10. EULOPHIA COCHLEARIS Lind. Comp. Bot. Mag. 19. 202:

Foliis ensiformibus acuminatis recurvis numerossissimis, scapo ramoso terminali squamis longis acuminatis vaginato, perianthio carnoso connivente, sepalis ovatis acutis, petalis minoribus obtusioribus, labello cochleari indiviso crenato extus sulcato intus subbarbato, calcare brevi retuso ventricoso.

Outniqualand, ad margines sylvarum. — Near Hartenbosch, by Mossel Bay, Burchell.

Very like E. micrantha, but larger and with totally different lip. These 2 species resemble E. lurida in inflorescence and general appearance.

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11. EULOPHIA ENSATA Lindl. B. Reg. 1147. — Comp. Bot. Mag. 19. p. 201: Prope Kovi Drege.

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12. EULOPHIA MACROSTACHYA Lindl. Orch. 183. Wight Ic. VI. 1667. 1668:

Leaves oblong, acuminated at both ends, plaited, somewhat 3ribbed, scape simple, radical, longer than the leaves, sepals linear lanceolate, acuminate, petals conformable, broader, subundulate, lip suborbicular, threelobed, lateral lobes about the length of the shortened, deeply cleft middle one; two short plates near the base, spur short roundish, obtuse, inflated.

Flowers greenish yellow, lateral lobes of lip tinged and streaked with crimson lines, middle lobe yellow.

Neilgherries: Banks of the stream at Burlear. Ceylon.

Lindl. Bot. Reg. XXIII. 1837. 1972: Sepala et tepala viridia. Labellum intus croceum, rubro striatum punctatumve, extus albidum.

13. EULOPHIA LURIDA Lindl. Orch. 182. — Bot. Reg. XXI. 1836. 1821: Sepala lilacina. Tepala aquose lilacina. Labellum luteum.

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14. EULOPHIA FILICAULIS Lindl. in Ann. Hist. X. 1842. p. 184:

Foliis — —, scapo gracillimo paniculato, bracteolis pedicellis multo brevioribus, sepalis petalisque linearibus obtusis, labello oblongo apice trilobo basi in cornu brevi producto, laciniis lateralibus brevibus, inter-

media oblonga concavà crispa intus laevi venis quibusdam paulo elevatis, anthera bicristata

Mexico. Karwinski herb. reg. Monac.

A very slender graceful plant with the flowering stem 1½ foot high.

15. EULOPHIA VIRENS R. Br. Lindl. Orch. 182. Wight Ic. pl. Ind. Or. Vol. III. 913:

With Geodorum dilatatum. Kanathkoovoodoo a few miles of Coimbatore in clefts of rock filled with vegetable earth in great abundance; some of the specimens upwards of 3'.

16. EULOPHIA BICOLOR Dalzell in Hook Kew gard. misc. III. 343:

Foliis 2—3 linearilanceolatis acutis multiplicatis serotinis, sepalis lineari oblongis acutis 7-nerviis, petalis oblongis obtusis sepalis brevioribus medio trinerviis, nervis exterioribus penninerviis, labio obtuse saccato trilobo, lobis lateralibus abbreviatis planis erectis intermedio elongato recurvo, marginibus crispo, disco venis 10 cristatis praedito, scapo 1½ pedes alto, stricto pauci- (9—10-) floro, foliis longiore, floribus distantibus (haud secundis nec pendulis) purpureis vel flavovirentibus, bracteis floralibus subulatis; ovario unciali dimidio brevioribus, capsula lineari tereti deflexa 2 pollicari.

F. 9—12 p. lg., 2—2½ S. — „Ambercund" indigenorum. Crescit in jugo Tybadrensi; fl. Jun.

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17. EULOPHIA CAMPESTRIS Lindl. Orch. 185. Huc: *Eulophia ramentacea* Lindl. in Wight Ic. pl. Ind. or. Vol. V. 1666:

Leafless; bracts subulate, shorter than ovaries; flowers erect; sepals and petals linear; spathulate acute; lip threelobed, the middle lobe undulated, obtuse; plates of the disk three, broken or torn towards the point; spur obtuse, conical.

Coorg, Mysore etc. Leaves follow the flowers.

18. EULOPHIA MACULATA Rchb. fil. Mss. Huc: *Oeceoclades maculata* Lindl. Orch. 217. etc. (Cur misera planta pro Angreco habita fuerit, nescio).

19. EULOPHIA CILIATA Rchb. fil. *Limodorum ciliatum* Schumach. Pl. Guin. II. 174. *Galeandra gracilis* et *Galeandra extinctoria* L. O. 187. *Eulophia gracilis* Lindl. Bot. Reg. 724.

Observatio. Omnino non intelligo, cur Eulophia exaltata Rchb. fil. in Lindl. Contrib. to the Orchidology of India ad Cyrtoperas relata fuerit.

Species exclusa.

Eulophia squalida Lindl. = *Cyrtopera squalida* Rchb. fil.

1441. DIPODIUM *RBr.*

Prodr. I. 330.

1. DIPODIUM PUNCTATUM R. Br. l. c. 331. B. Reg. XXIII. (1837). 1980.

2. DIPODIUM PICTUM Rchb. fil. Xenia II. 15. Huc: *Wailesia* Lindl. in Hort. Journ. Soc. IV. 1849. 262:

Sepala et petala aequalia, patentia; lateralibus basi subobliquis. Labellum sellaeforme, cum columna parallelum, eaeque basi saccata adnatum, medio villosum, basi bidentatum. Saccus inappendiculatus. Columna brevis, truncata, semicylindracea. Anthera bilocularis. Pollinia 2, globosa, dorso excavata; caudiculis 2 linearibus, divergentibus, glandulae ovatae alligatis.

Herba epiphyta, caulescens, foliis distichis coriaceis; pedunculo multifloro laterali erecto. Java.

WAILESIA PICTA Lindl. l. c. et Paxt. Fl. G. XVI. 321:

Epiphyte. Habit of Vanda, Angrecum. Caulescent. Leaves long, in two opposite rows, coriaceous, chanelled, threeribbed, terminating in an acute nearly oblique point. Peduncle rising from the side of the stem, erect, nearly a foot long, deep purple, bearing from 9—12 flowers, each about an inch and a half in diameter, externally brightly spotted with crimson on a pale yellow ground; inside the spots only just show through. Sepals and petals spreading, narrowly oblong, blunt, very nearly alike in size, form and texture, except that the two lateral sepals are slightly oblique at the base. Labellum oblong, saddle-shaped, blunt, and coarsely woolly at the upper end, shaggy along the middle; at the sides it is smooth, and streaked with crimson; at the base it is flattened and downy, united by the edges to the column, so as to form a small sac, but destitute of any appendage within the sac except a small rounded callosity; above the sac on either side, it has an obtuse linear smooth tooth. Column short, stiff, truncated, deep yellow at the end, rounded at back and plain in front, where it is moreover hollowed out near the base and closely covered with a soft felt. Stigma small transversal oval space near the summit of the column. Anther whitish, placed obliquely in rear of the stigma with an ovate point and twocelled. Pollenmasses two, globular, partially two-lobbed, each attached to a long, narrow diverging caudicle, holding fast to a common ovate gland.

Huc: *Leopardanthus* Bl. Cf. Walp. Ann. III. 562.

3. DIPODIUM PALUDOSUM Rchb. fil. l. c. *Wailesia paludosa* Rchb. fil. Bonpl. II. 1858. 1. Aprili:

Perigonio tenuiori, labello ligulato acuto ante basin bidentato, per lineam mediam barbato, gynostemio utrinque alato, ala rotundata.

Grammatophyllum paludosum Griff. T. CCCXXIII.

Folia chartacea, lanceolata acuta trinervia dense disticha in caule prope bipedali Pedunculi axillares elongati superne racemosi multiflori.

1442. GALEANDRA *Lindl.*

Bot. Reg. I. 1840. XXVI. 49.

Galeandra from galea, a casque, and ἀνήρ, an anther; in allusion to the crested anther. At first sight this would seem to be a hybrid name, being constructed of two words belonging to different languages; but as galea itself is from the Greek γαλῆ, I hope critics will consider the name allowable.

Sertum Orchid. 37: Perianthium patens, petalis sepalisque subaequalibus ascendentibus. Labellum infundibuliforme indivisum vel obsolete trilobum, calcari intus lamellis (4) auctum. Columna erecta membranaceo-alata, clinandrio declivi. Pollinia 2, postice excavata, caudicula brevi, glandulae brevi divergenti bilobae adnata. Herbae terrestres et epiphytae, caulibus foliatis, racemis terminalibus. — I had suggested G. Baueri might be combined with the Eulophia gracilis B. Reg. and a third Sierra Leone plant by the funnel shaped undivided lip, the crested anther, peculiar form of the gland, to which pollenmasses are attached. These characters are essential to Galeandra, but also in part important and it is requisite for them to be combined with other peculiarities in order to constitute a really good genus. Of the characters to be rejected the crested anther is principal, of those to be added, the presence of 4 parallel plates upon the lip and a terminal inflorescence. Euloph. gracilis will in that case be excluded from Galeandra, and so perhaps will G. extinctoria, both which require further examination in order to determine whether or not they are to be stationed definitively in the genus Eulophia. Zygopetalum and some others nearly allied to Galeandra, involve some very difficult inquiries for which sufficient materials have hardly been as yet accumulated.

1. GALEANDRA EUGLOSSA Rchb. fil. in v. Schl. Bot. Ztg. 1852. 935:

Perigonii phyllis 5 lanceolatis apiculato-acutis, labello a rotundata basi producto, trilobo, lobis lateralibus medianis, acutangulis, lobo medio producto, ligulato, marginibus lateralibus repandulo, carinis tribus parvulis in basi lobi medii, calcari clavato labelli dimidium vix aequante, gynostemio semitereti, rectiusculo, postice in apicem angulate producto, rostello triangulo, producto, apice bidentato.

Blätter länglich, spitz, unten keilförmig. Blüthen fast so gross, als bei Eulophia guineensis. Sierra Leone. Van Hees. Herr Van Houtte.

2. GALEANDRA JUNCEA Lindl. Sert. (1840). sub 37:

Tuberosa, caule stricto, paucifolio, foliis linearibus acuminatis trinerviis longe vaginantibus, racemo erecto multifloro, labelli lamina denticulata obsolete triloba rotundata, lamellis 4 pone basin contiguis, juxta medium incurvis exinde tribus serrulatis confluentibus.

Grassy plant about 2' high, with long narrow leaves, small pink flowers, tubers in size and form resembling the cormi of a Crocus. Mr. Sch. found it in abundance in the Sawannahs adjacent to the River Berbice and Dr. von Martius in Brazil in fields near Almeirim in the Province of Para.

Lond. Journ. II. 1843. p. 672. — *Phajus rosellus* Lem. Walp. Ann. I. 781.

3. GALEANDRA DEVONIANA Lindl. Sert. (1840). 37:

Caule erecto simplici tereti polyphyllo, foliis lanceolatis, trinerviis, racemo sessili erecto multifloro, labelli lamina ovata obtuse crenulata, lamellis 4 pone basin, antherae crista carnosa rotundata pubescente.

„At the banks of the Rio Negro, a tributary of the Amazon, where near Barcellon or Marina, we found it growing in large clusters on the trees, which lined the river, some times on the Mauritia aculeata, or even in the ground, where the soil consists of vegetable mould. Clusters sometimes 10—12' circumf. Stems 5—6', at the lower part purple, green higher. Equally near Harendauar or Podrero.

Lindl. in Lond. Journ. II. 1843. p. 672. — Lindl. Paxt. Fl. G. II. p. 180. N. 450: found again by Mr. Spruce at Sir Schomburgk's localities. — B. Mag. 4610. — Lem. Jard. II. 195. (Ad ic. Hook.)

4. GALEANDRA BAUERI LO. 186. Bot. Reg. 1840. XXVI. 49:

Caule simplici, foliis lanceolatis trinerviis, corymbo terminali pedunculato nutante foliis breviore, pedunculo squamis lineari-lanceolatis membranaceis vaginato, sepalis petalisque lineari oblongis acutiusculis; labello maximo antice emarginato apiculato crenulato, calcare ovario aequali.

Perigonium viride, labellum centre flavum et extus flavum, antice purpureum.

French Guiana. Martin. Mexico. Kisatipa, ten leagues from Metacatepec at the upper end of a dry ravine, terminating half way up the mountains in a south-west aspect. Ross. — Mexico. Hartweg.

Galeandra Baueri Paxt. 1847. p. 49. — Batem. Orch. Mex. et Guat. 19. (icon phantastica horribile florulenta foliis cauleque minus correctis). Guatemala Skinner.

5. GALEANDRA DIVES Rchb. fil. Warscew. Bonpl. II. 98:

Aff. Gal. Baueri Lindl. labelli lobo medio retuso lateralibus vix longiori. — Folia lanceolata acuminata, spathae membranaceae vaginantes acutae, panicula flexuosa, bracteae lanceolatae acuminatae scariosae ovariis pedicellatis triplo breviores, sepala ac tepala lanceolata acuminata subaequalia, labellum transverse rhombeum apice late retusum, margine minute denticulatum; carinae 2 in fundo; postice in calcar ab ostio amplissimo tenui extinctoriiformi ovarium pedicellatum adaequans productum.

Blüthen gelb, Lippe vorn purpurn, ausserdem Purpuranflug an den Hüllblättern. Wir halten nach reiflicher Erwägung diese Pflanze für verschieden von G. Baueri welche einen völlig verschiedenen Riss der Lippe besitzt, deren Hüllblätter kürzer sind, als die Lippe. Als Abbildung der G. Baueri Lindl. citiren wir zunächst Lindl. Orch. by Bauer, Nr. VIII. — N. Granada. Warscewicz. — Galeandra Baueri var. flore luteo. Hook. M. Mag. 4701.

Huc: *Galeandra cristata* Lindl. Bot. Reg. XXX. (1840). Misc. 69:

Sepalis petalisque lineari lanceolatis reflexis, labello convoluto margine crispo intus pubescente et basi bicarinato, calcare acuminato horizontali, antherae crista rhombea unguiculata.

Cayenne. imp. Lodd. (1308). Habit of G. Devoniana, but the flowers are much smaller and paler, and the anther has a very singular crest, resembling a purple lozenge mounted on a white shaft.

Obs. Si quidem hanc non cognovi ex Lindleyana diagnosi, ipse ill. Lindley fuit causa. Nam planta, cui habitus Galeandrae Devoniensis adscribitur, non praebebit effigiem Galeandrae Baueri.

6. GALEANDRA STANGEANA Rchb. fil. Bonplandia IV. 323.

7. GALEANDRA BOULIAWONGO Rchb. fil. in v. Schl. B. Z. 1852. 935:

Pedunculo valido plurifloro, bracteis ovatis acutis, ante apicem utrinque emarginatulis, pedicellis bracteas magnas pollicares superantibus, ovariis fusiformibus, perigonii phyllis externis lanceolatis acutis (reversis?), internis dilatatis oblongis acutis basi cuneatis, labello basi in calcar extinctoriiforme abbreviatum producto, ante medium trilobo, lobis lateralibus obtusangulis, lobo medio lato ligulato, retuso, crispulo, nervis elevatis medianis ante lobum medium productis, in carinas tres elevatas ibi abrupte desinentibus, gynostemio semitereti, anthera cristata, apice breviter bicorni.

Blüthen meist grösser, als die von G. Baueri, fast so gross als die der G. Petersii. Gabon. „Remède contre la Colique. On fait bouillir, et boit deux fois par jour. „Boulia Wongo.“ Ed. Jardin.

8. GALEANDRA ANJOANENSIS Rchb. fil. Linn. XX. 680. cf. Walp. I. 787. (sphalmate angor- — —, pro anjoa- — —).

9. GALEANDRA BEYRICHI Rchb. fil. Linn. XXII. 854. Walp. Ann. III. 552. — Bonpl. II. 19: violett blühende Savannenpflanze Caracas. Wagener.

1443. ZYGOPETALUM Hook.

Bot. Mag. 2748.

Huc: *Bollea* Rchb. fil., *Pescatoria* Rchb. fil., *Warscewiczella* Rchb. fil., *Kefersteinia* Rchb. fil., *Promenaea* Lindl., *Huntleya* Bat. ex p.

§. 1. Uniflora.

Sert. I. Bollea: Columna naviculari, labelli limbo replicato, tumore maximo sulcato.

1. ZYGOPETALUM VIOLACEUM Rchb. fil. Mss. Huc: *Huntleya violacea* Lindl. Sert. (1839). 26:

Sepalis petalisque oblongis obtusis margine crispis, labello reniformi emarginato crista nuda sulcata, columna maxima carnosa naviculari.

Demerara.

Tuft of leaves embracing each other at the base; blade is 8—9" long, erect, acute, between membranous and leathery in texture. Flowers 3" diameter. Two bracts. Peduncles 6 inches long. Sepals curved inwards at the point, crisped at the edges, the 2 lower are united by their bases into an inconspicuous pouch, outside pale soft violet fading to white, inside deeper and richer violet. Petals nearly the same. Lip united to the pouch of the lateral sepals by a short narrow foot, which curves upwards and dilates into the lamina; the latter is rich violet, kidney-shaped, with a little notch at the end, and slightly toothed. Column as large as the lip, fleshy, deep violet, broadest at the base, curved at the apex. Essequibo: on an island near the Cataract Cunaka toto or Silk Cotton Fall Schomburgk. (Journ. of Royal Geograph. Soc. VI. p. 232). (Ibi periit Schomburgkii amicus Reiss). Parad. Vindob. fasc. 13. — Lond. Journ. 1843. p. 672.

Bot. Reg. XXV. (1839). Misc. 17: Flowered with Messrs. Loddiges. Flowers are a deep rich violet, darker, than the darkest part of Zygopetalum Mackaii; 2—3" diam. tipped with greenish yellow, melting downwards into white, which soon confounds itself with the general tint of rich violet. — Van Houtt. Fl. Serres VII. 678.

Rchb. fil. in v. Schl. B. Z. 1852. 668. *Bollea*:

Perigonii carnosi phylla 5 oblonga subaequalia recte inserta, lateralia externa pedi gynostemii adnata. Labellum unguiculatum, cum pede gynostemii exacte continuum; unguis ligulatus, ecallosus; lamina basi cordata, dein rotundata, marginibus revoluta, callus in disco intrusus maximus, transsectione dolabriformis, costatus. Gynostemium seminaviculare, antice valde excavatum, marginibus antrorsis exalatis, carinaeformibus; androclinium perpendiculare, marginibus carnoso-elevatis; processus rostellaris dens medius linearis, corneus, lobi laterales membranacei, oblique extrorsum descendentes, stigma tegentes. Stigma semilunatum, sursum curvatum, limbo inferiore integerrimo. Apparatus pollinis Zygopetali.

Genus dicatum amicissimo cl. Dr. Bolle. *B. violacea* (*Huntleya violacea* Lindl.)

Lindl. G. Chronicle 1850. 1866: „Nothing can be a Huntleya without the great fleshy hooded column of H. violacea."

Obs. Forsan huc planta mira, subfabulosa, Monocerotis equi socia dignissima, referenda est.

Lindl. Bot. Reg. XXIII. 1837. sub fol. 1991: Huntleya sessiliflora (Bateman ined.) „floribus, sessilibus." In Guiana Schomburgk. — Lindl. Sert. Nr. 26: Huntleya originally established by Mr. Bateman upon a Demarara plant received from Mr. Schomburgk and said to resemble the Huntleya Meleagris of Bot. Reg. — Lond. Journ. II. 1843. p. 672. Huntleya sessiliflora Bat. in Bot. Reg. sub t. 1991. British Guiana. Schomburgk.

Contra cl. Bateman in litteris March. 26. 1863. Biddulph Grange, Congleton: „I know nothing of Huntleya sessiliflora, indeed I never even heard the name till it was mentioned by You. There must be some mistake in the matter."

Sect. 2. *Pescatoria*: Columna gracilis, semiteres; labelli limbus replicatus callo maximo gyroso insculpto.

2. ZYGOPETALUM CERINUM. Huc: *Huntleya cerina* Lindl. Paxt. Fl. G. III. (1851). 62: Sepalis subrotundis concavis, labello ovato convexo, retuso, crista crassa semicirculari truncata plicata, columna apice nuda.

Firm, whitish, waxy blossoms, not unlike those of Maxill. Harrisoniae. Veraguas by Warscewicz. — Chiriqui Volc. 8000'. General appearance of the Huntleya violacea. Flowers rise singly from the base of the leaves upon a peduncle about 6'' long with a few short tubular bracts 3 inches across, the sepals are rounded, and even at the edge, of a very pale straw colour. Lip is somewhat ovate, convex, indented at the point, much more yellow and furnished near the base with a deep thick semicircular ruff, composed of numerous plaits and folds. The column is deep violet near the base, has no expansion or hood over the anther.

Huc: *Pescatoria* Rchb. fil. in v. Schl. Bot. Ztg. 1852. p. 667:

Perigonii subcarnosi phylla 5 cuneato-obovata, acutiuscula, tria superiora recta, lateralia externa oblique in pede labelli inserta. Labellum unguiculatum, unguis ligulatus, media basi carinatus carina triangula, basi utrinque triangule auriculatus, sub angulo obtuso in basin gynostemii excavatam introrsus (uti ipsissima labelli basis in Miltonia spectabili). Lamina triloba, lobi laterales trianguli, erecti, disco carnoso utrumque conjungente; discus medio longitudinaliter carinatus, antrorsum rotundatus, multicristatus, cristulae obtusatae, oblique imbricatae; lobus labelli medius rotundatus revolutus, ipso limbo revoluto a lobis lateralibus erectis separatus. Gynostemium aequaliter semiteres, antrorsum excavatum; androclinium prope perpendiculare, apice productum, immarginatum; processus rostellaris trilobus, dens medius linearis, corneus, lobi laterales membranacei, integri, stigma tegentes. Stigma ellipticum, limbo inferiore trilobulato. Apparatus pollinis Zygopetali.

Genus dicatum praenobilissimo Pescatore, Orchidearum cultori celeberrimo. *P. cerina* (*Huntleya cerina* Lindl.)

3. ZYGOPETALUM TRIUMPHANS. Huc: *Pescatoria triumphans* Rchb. fil. v. Warscew. Bonpl. II. 97:

Labelli ungue brevissimo, callo labelli antice gyroso plicato.

Perigonium explanatum, sepala ovata apiculata, tepala angustiora, basi cuneata, labelli unguis ligulatus, discus rhombeus, postice planus, per lineam mediam pluricarinatus, limbo antico gyroso plicatus, lamina oblonga postice utrinque ad angulos disci rhombeos extrorsos utrinque humerata, antice angustata apice retuse biloba, tota arpophyllacea, gynostemii prope apodis auriculae ligulatae utrinque in basi. Blüthen so gross, wie die der P. cerina, schneeweiss. Lippe und Spitzen der Hüllblätter stahlblau; Säule und Lippennagel goldgelb. Blätter länglich-spitzlineal. Ein wunderbar schönes Seitenstück zu dem prächtigen Zygopetalum aromaticum. Neu-Granada. v. Warscewicz. — Rchb. fil. Xenia I. Tab. 11.

Sect. 3. *Cochleare*: Columna gracilis semiteres. Labellum explanatum callo plicoso gyroso. Caudicula linearis.

4. ZYGOPETALUM FLABELLIFORME Rchb. fil. Mss. Huc: *Cymbidium flabelliforme* Swtz.! Fl. ind. occ. 1471. *Zygopetalum cochleare* Lindl. Bot. Reg. XXII. (1836). 1857.:

Foliis obovato oblongis plicatis, pedunculis unifloris radicalibus multo longioribus, sepalis petalisque ovato lanceolatis conniventibus, inferioribus majoribus, labello cochleato subrotundo bilobo crista transverse crenata, anthera ecristata. Trinidad. — Hook. B. Mag. 3585: pseudobulbo nullo, lobis late lanceolatis, scapo unifloro, sepalis petalisque oblongis subaequalibus, labello subquadrato basi ventricoso lateribus inflexis crispatis callo baseos lunato depresso antice crenato. Eulophia cochleata Hort. Knight. Probably Brazilian.

B. Reg. XXV. (1839) 14. (sub Huntleya Meleagride):

Mr. Rollisson assures me, that he received his specimen from the same country as that, which produced the Zygopetalum cochleare fig. in this work, pl. 1857, if so, I must have been misinformed as to Trinidad being the native country of the later as more disposed to believe that such was really the fact, because I find a drawing of what is apparently a luxuriant specimen of Z. cochleare, among Mr. Descourtilzs coll. gathered in Brasil, on the high mountains separating the province of St. Paul's from that of Minas Geraes, and known by the name of the Mantiqueiras, where it flowers in the hottest season.

Cf. Rchb. fil. in v. Schl. Bot. Z. 1852. 714: *Warszewiczella cochlearis (Zygopetalum cochleare* Lindl. *Huntleya imbricata* Hort. Hamb.). l. c. 765: *W. cochlearis* Rchb. fil. supra p. 714:

Labello brevissime unguiculato, subquadrato, angulis baseos obtusatis, humeratis, angulis anticis obtusatis, basi foveata, lamina transversa trapezoidea denticulata in basi.

Zygopetalum cochleare Lindl. Bot. Reg. 1851. B. Mag. 3595. *Huntleya imbricata* Hort. Hamb. *Zyg. conchaceum* Hoffg. — Bonpl. II. 15.: Caracas. Oct. 3000'. Höchst selten. Wagener.

Sect. 4. *Warscewiczella:* Columna gracilis semiteres. Labellum explanatum callo planiusculo tabulari. Caudicula basi utrinque abrupte angulata.

Huc: *Warscewiczella* Rchb. fil. in v. Schl. B. Z. 1852. 635:

Perigonii phylla lanceolata, oblique inserta, externa phylla marginibus tantum phylla interna alabastrorum imbricantia, nec omnino tegentia. Labellum cum pede brevissimo gynostemii continuum, brevissime unguiculatum, dilatatum callo depresso, subtus libero, basi infima (et lateribus) adnato in ima labelli basi. Gynostemium clavatum, antice excavatum, superne marginibus subalato-marginatum; androclinium immarginatum, perpendiculare, magnum; rostelli dens medius lineari-subulatus, longus, ultra stigma transversum lunato-lineare productum. Anthera depressa, cornea, basi subtriloba. Pollinia quaterna, depresso-pyriformia, per paria incumbentia; caudicula ligulari, basi utrinque angulata; glandula rhombea. Maxillarideae habitu Chondrorrhynchae epseudobulbes, pedunculis unifloris.

Diese Gattung unterscheidet sich von Warrea durch die schiefe Anheftung der Hüllblätter, die vorn ausgehöhlte, oben keulige Säule, die beiderseits in Spitzen ausgehende caudicula und die eigenthümliche Lippenplatte, die mit den aufrechten Leisten der ächten Warrea-Arten (*W. tricolor* Lindl., *cyanea* Lindl., *bidentata* Lindl.) nichts gemein hat. — Viel näher steht die Gattung der Chondrorrhyncha: diese hat ein längeres Kinn, der Schiefstand der Hüllblätter ist viel bedeutender und die Lippe trägt keine Platte am Grunde, dafür ein kleines dreizähniges Leistchen in der Mitte. Die Säule ist nicht vorn gehöhlt. Die Narbendecke ist dreizähnig, seitliche Zähne herabgeschlagen. Die Caudicula kurz, stumpf fünfeckig, breit. Pollenmassen höchst ungleich.

Rchb. fil. l. c. 765: Wie ich vermuthete, gehört *Zygopetalum cochleare* Lindl. wirklich hierher. Der Gattungscharakter muss daher wesentlich geändert werden. Der Schiefstand der Hüllblätter muss ganz wegbleiben, da er bei W. marginata geringer ist und bei W. cochlearis fehlt. Die Caudicula ist hier kurz, rautenförmig. Die Gestalt, der Durchschnitt (!!) der Säule, die eigenthümliche Art und Stellung des übergreifenden Lippenwulstes müssen hinreichen zur Trennung dieser Gattung.

5. ZYGOPETALUM LUEDDEMANNIANUM Rch. fil. Mss. Huc: *Warscewiczella Lüddemanniana* Rchb. fil. in Otto Hamb. Gartenztg. 1860. 180.

6. **ZYGOPETALUM AROMATICUM** Rchb. fil. in v. Schl. B. Ztg. 1852. 668:

Pedunculo abbreviato erecto unifloro, flore magno, specioso, perigonii phyllis 5 lanceolatis, acutis, torto undulatis; labello prope sessili, basi utrinque auriculato, auriculis obtusatis, callo magno antrorsum semilunato, multisulcato in basi, transgrediente in labelli laminam a basi angusta subito obreniformen, margine multilobulam, crispulam, disco omnino epapilloso; gynostemio graciliori, androclinio triangulo, marginibus stigmatis maximi productis subquadratis.

Blüthen grösser, als bei Zygopetalum Mackayi. Die fünf Hüllblätter scheeweiss. Lippe azurblau, am Grunde purpurfarbig. Säule weiss mit Purpurstreifen. — Blätter länglich, spitz, am Grunde keilförmig. Trugknollen scheinen zu fehlen. — Mittelamerika. — *Warscewiczella aromatica* Rchb. fil. in hortis.

7. **ZYGOPETALUM MARGINATUM** Rchb. fil. Mss. Huc: *Warscewiczella marginata* Rchb. fil. in v. Schl. B. Z. 1852. 636:

Labello a basi cuneato, dilatato, trilobo, lobis lateralibus oblongis, antrorsis, lobo medio producto, bilobo, lamella basilari foliacea, oblonga, bidentato-emarginata.

Huntleya marginata Hort.

Warrea marginata Rchb. fil. in litt. Gelblich weiss. Die Lippe hat einen violetten Rand des Mittellappens und dergleichen Zeichnung am Fuss der Säule. — Mittelamerika.

Rchb. fil. l. c. 836: Nachdem ich viele Blüthen erhalten, finde ich die grosse länglich viereckige Platte auf dem Lippengrunde oft 8—10-zähnig, während die zweite erhaltene nur 2 Zähne hatte.

Rchb. fil. l. c. 765: Ganz frische Blüthen zeigen rein weisse Hüllblätter, die Spitzen der seitlichen inneren sind zart gelbgrün angehaucht. Der Lippenrand schön violett. Die Platte des Lippengrundes ist violett gestreift und einzelne solche Streifen ziehen sich über die Scheibe der Lippe.

Rchb. fil. Bonpl. III. 67: S. Pedro, Aspasica. März. April. 4—8000'.

Huc: *Warrea quadrata* G. Chronicle 1853. 647:

Labelli lobo medio orbiculari retuso, lateralibus semiovatis conniventibus, appendice carnosa subquadrata sulcata, apice obtuse tridentata.

Near W. discolor in habit and general form. Flowers larger, more fleshy, with no purple except upon centre and upper half of lip. Otherwise the blossoms are a clear uniform straw colour, with a green tip to the sepals. It is essentially known by the appendix at the base of the lip bearing nearly square, about 3 toothed in front and deeply furrowed. That of W. discolor is uniformly digitate. Jackson of Kingston. Wild Central-Am.? Pseudobulbs ovate. Leaves pale green, 6" long, very obscurely veined, oblong, acute, flat, except at the base, where they are much narrowed and channelled. Peduncle not quite so long as the leaves, with one light sheath near the base, and a pair of nearly opposite very unequal bracts, from between which rises the solitary flower. The lateral sepals are abruptly bent back, but remain perfect, straight, with the lower edges auriculate and involute. The upper sepal is ovate oblong and quite erect. The petals have the same form and size as the last, but are rolled back above the middle. Of the lip, which is circular with a retuse termination, the edges are bent downwards so as to give it a somewhat angular appearance, and the lateral lobes are long enough nearly to meet over the column. The appendix at the base is slightly tinged with violet, the unguis is yellow with a slight tubercle, the column which is downy in front, is pure white.

Bot. Mag. 4766. Pescatorea I. t. 6. — Rchb. fil. Xenia I. Tab. II. 7—13. p. 61:

Radices crassae, cylindraceae plurimae, nidum quasi simulantes. Vaginae et folia praecedentis. Pedunculi vulgo breviores paucivaginati, vix umquam erecti (uti in icone Bot. Mag.), sed antrorsi. Perigonium subcarneum. Sepalum impar et tepala

apicibus suis reflexa; illa oblongo lanceolata acuta, haec subaequalia, paulo latiora. Labellum basi brevissime unguiculatum dein utrinque humeratum trilobum; lobi laterales obtusanguli nunc subbasilares, divaricati (fig. 7), nunc antrorsi, mediani (fig. 8.); lobus medius lato ligulatus medio sinu exciso bilobulus subtruncatus, utroque angulo obtusangulus. Lamella ante basin depressa, per discum nunc longitudinaliter impressa marginibus lateralibus integerrima seu unidentata, introrsum seu extrorsum curvata, antice polyodonta seu excise bidentata; inferne liberrima. Gynostemium transsectione semiteres superne clevatum, hinc subvelutinum. Androclinium omnino declinatum. Rostellum inciso triangulum prominente dente lineari subulato. Anthera depresso mitrata antice retusa processu medio ligulato retuso. Pollinia oblonga depressa incumbentia sessilia in ligula terminali caudiculae oblongo ligulatae angulo utroque triangulo prominenti. Glandula rhombea ab apice caudiculae obcelata. Stigma trapezoideum. Carinula in basi antica gynostemii. Perigonium albidum. Limbus labelli purpureo seu coeruleopurpureo praetextus striis quibusdam et in lamella et ante eandem. Gynostemii albidi basis infima citrina stria utrinque transversa superposita violacea.

8. ZYGOPETALUM VELATUM Rchb. fil. Mss. Huc: *Warszewiczella velata* Rchb. fil. et v. Warscew. Bonpl. II. 97:

Aff. W. marginatae labello quinquelobo, callo dorso carinato.

Sepala oblonga acuta, tepala cuneato obovata acuta, labellum a basi brevissime unguiculata utrinque postice rectilineum antrorsum oblongum, quinquelobum, lobo utrinque angulato laterali gemino, postico acutiore, lobus anticus abbreviatus, truncatus, obtusatus, callus in basi planus inferiori pagina liber, basi tantum affixus, subquadratus, lateribus 3—4-lobulatus, apice obtusato truncatus quadrilobulus, per lineam mediam carinatus, gynostemium incurvum, dorso velutinum, caudicula utrinque apice acutangula more generis. — Blüthe grösser, als die der W. discolor, weiss. Lippe purpurn gesäumt und eben so auf der Scheibe gestreift. Nächst W. marginata (*Warrea quadrata* Lindl.), aber durch Lippenumriss und den Kiel auf der Platte am Grunde der Lippe sehr gut unterschieden. v. Warscewicz.

Rchb. fil. Xenia I. tab. 23. I. 1—6. p. 60:

Planta more generis ebulbis. Vaginae basilares a radicibus adventitiis crassis perforatae. Folia a cuneata basi oblongo ligulata acuta. Tepala cuneato obovata acuta. Labellum a basi brevissime unguiculata utrinque postice rectilineum et elevato marginatum, antrorsum oblongum, quinquelobum, lobo utrinque angulato laterali gemino postico acutiore, lobus anticus centralis abbreviatus, truncato bilobus obtusatus. Callus in basi planus inferiori pagina liber, basi tantum affixus, subquadratus, lateribus ima basi unilobulatus, dein angulatus, apice truncato quadrilobulus, per lineam mediam carinatus, per utrumque marginem tumido limbosus. Gynostemium semiteres, incurvum, dorso velutinum. Anthera depresso mitrata postice obtuse truncatoque apiculata, antice acutangula. Rostellum trilobum sinubus incisis angustis; processus rostellaris medius lineari ligulatus acutiusculus. Caudicula utrinque basi acutangula more generis. Flos illo Warscewiczellae marginatae major, candidus. Labellum purpureo limbatum, et pari modo in disco striatum.

9. ZYGOPETALUM AMAZONICUM Rchb. fil. Mss. Huc: *Warscewiczella amazonica* Rchb. fil. et Warscew. Bonpl. II. 97:

Sepalis tepalisque lanceolatis acutis, labello a basi angusta late ovato, apice rotundato bilobo sinu acutangulo interjecto.

Blüthen zweimal so gross, als die der W. discolor, schneeweiss, die Lippe mit rothen Längsstreifen. v. Warscewicz.

10. ZYGOPETALUM DISCOLOR Rchb. fil. Mss. Huc: *Warrea discolor* Lindl. Paxt. Fl. G. I. 73. ic. xyl. 49:

Costa Rica. Sepals and petals pale lemon colour, tinged with purple, lip dull purple. Warscwz. (fig. 49. lip magnf.).

Very distinct one flowered species, the leaves of which I have not seen. Sepals 1½—1¼ inch long, straw coloured, the lower straight, concave and deflexed, the upper erect, rolled back at the point, pressed close the petals, and with them forming an arch over the column and lip. Lip has a nearly circular outline, but is so concave, as not to present that form until flattened: it is slightly trilobed, of a deep dull, velvety purple colour, white at the base, a roundish oblong, yellow appendage, which adheres to the lip and is divided at the edge into strong diverging teeth, five of which terminate so many distinct ribs. The colour is yellow, shaggy in front, with an anther sloping forward and a subulate rostel. The pollenmasses 4, plane convex, in pairs at the end of a broad, flat, thin caudicle, furnished on either side with a lateral tooth. (A singular monstrosity here occurred in the two posterior pollenmasses, which had grown together into one by a narrow neck). A remarkable species, the flower of which resembles a Lycaste, but their pollen apparatus and lip appendage is of Warrea. Upon this point it may be useful to explain, that in Lycaste the caudicle is subulate and the lip appendage a truncate plate near the middle lobe of the lip, while in Warrea the caudicle is broad and flat, and the lip appendage ribbed, fringed and stationed at the very base of the lip.

Lindl. Journ. H. Soc. IV. 265: Scapo unifloro? apice bracteis 2 inaequalibus, ovariis proximis quorum altera linearis, sepalis oblongis lateralibus rectis deflexis canaliculatis superne erecto apice revolutis, labello subrotundo obsolete trilobo emarginato concavo appendice adnato subrotundo oblongo pectinato.

Rchb. fil. in v. Schl. Bot. Ztg. 1852. 636: *Warscewiczella discolor.*

Labello a basi cuneato, dilatato, trilobo, lobis lateralibus obtusatis, intermedio latissimo, producto, bilobulo, lamella basilari membranacea, medio carinata, antice in laminam margine polydactylam excurrente.

Blätter länglich lanzettlich, spitz, 7—8 Zoll lang, nicht viel länger als der Blüthenstiel. Aeussere Hüllblätter lanzettlich, blassgelbweiss, seitliche herabgeschlagen, innere breiter, aufrecht, schön violett. Lippe aufgerichtet, dunkel violett, am Grunde gelb. Säule hellgelblich, vorn violett. Am Fuss derselben ein Zähnchen auf der Lippenwurzel. Mittelamerika.

11. ZYGOPETALUM CANDIDUM Rchb. fil. Mss. *Warrea candida* Lindl. Cf. Walp. Ann. III. 543. Addenda: Centre of lip purple, towards the edge blue violet, at the base white streaked with red. The leaves not more than nine inches long. Flowers grow as in Huntleya together. — Van Houtt. Fl. des Serres VII. p. 123. xyl. — Pescatorea 15.

Warscewiczella candida Rchb. fil. in v. Schl. Bot. Ztg. 1852. 636: Labello brevissime unguiculato, quadrato, angulis baseos extensis, acute triangulis, angulis anterioribus obtusatis, basi subsaccato, membranis 2 supinis oblongis in baseos marginibus, lamina crassa triloba in media basi.

12. ZYGOPETALUM WAILESIANUM Rchb. fil. Mss. *Warrea Wailesiana* Lindl. Journ. H. S. IV. 264: Scapo unifloro? sub flore bractea duplici acuta cucullata aucto, ovario subpubescente, sepalis petalisque ovatis acutis patentissimis, labello subrotundo laevi, appendice radiata libera. — Parahyba in Brazil.

Lindl. Paxt. Fl. G. I. 73. cum xyl. 48: Found by Mr. Gardner in an excursion to the river Parahyba in search of Huntleya Meleagris. Flowers as large as those of Warrea cyanea. Sepals are all somewhat reflexed, the lateral not straighter than the rest; petals are also bent back, so that no arch can be formed over the column. The lip is tinted with delicate violet along the middle, roundish, concave, wedgeshaped at the base, not at all lobed, but so turned upwards at the edges as to look as if it was furnished with basal auricles. App. 5 radiating violet fingers, which are free from the lip except at their origin; at the sides the edge of the lip is also furnished with a thin, linear inflexed membrane. Column, pollenmasses of W. discolor. Journ. Hort. Soc. IV.

Sect. 5. *Kefersteinia*: columna gracilis, antice sub fovea carinata. Labellum magis cucullatum, quam in praecedente sectione.

Kefersteinia Rchb. fil. in v. Schl. Bot. Ztg. 1852. 633:

Perigonii patuli phylla oblonga, acuta, undulata, submembranacea, phylla lateralia interna retrorsum oblique inserta. Labellum cum gynostemii pede producto continuum, basi callosum. Gynostemium semiteres, apice clavatum, rectum, marginibus anticis alatum; androclinium perpendiculare ellipticum, immarginatum, apice rotundatum rostellari dente subulato; stigma lineare, transversum; carina longitudinalis a stigmatis labio inferiore ad medium gynostemium. Pollinia pyriformia, papyracea, excavatula, per paria incumbentia, valde inaequalia, in caudicula obtusa rhombea. Maxillarideae habitu Huntleyae, Chondrorrhynchae, epseudobulbes. Pedunculi uniflori. — Rchb. Xenia I. p. 66.

13. ZYGOPETALUM GRAMINEUM Lindl. Bot. Reg. XXX, (1844.) Misc. 15:

Foliis lineari-lanceolatis, scapo subunifloro capillari brevi ascendente, vaginulis laxis una in medio, duabus sub pedicello, labello subrotundo fimbriato tenui supra basin appendicibus 2 ovato-lanceolatis acutis aucto. Flores 3, Z. Murrayani magnitudine, magis membranacei. Scapus 2-pollicaris. Folia spithamaea.

Popayan in woods, rare. This is much smaller, than the other species and is the only one yet found west of the andes.

Lindl. in Orch. Lind. 1846. p. 13. „A bulbless epiphyte from the damp forests of Merida, 5000'. June. Flowers yellowish white, transparent; petals spotted with purple; lip veined with deep red.“ Nr. 1474. A broader leaved var. A beautiful little plant.

Keferstenia graminea Rchb. fil. apud v. Schl. B. Z. l. c.:

Phyllis quinis oblongo-ligulatis, acutis, membranaceis, labello obtuse rhombeo, antico retuso, marginibus anterioribus denticulato-laceris, membranaceis, callo erecto clitelliformi bilobo, antice emarginato in basi, lobo utroque erecto, trapezoideo, 3—4dentato; gynostemii alis triangulis medianis.

Huntleya fimbriata Hort. Hamburg. nonnull.

Blüthenhülle grünlich mit Purpurstreifen und Punkten. Lippe ebenso mit Schwarzbraun und Purpur; um ⅓ kleiner, als die der Promenaea Rollissonii. — Caracas.

Rchb. fil. Bonpl. II. 15. Caracas. Juni bis October. 6000'. Wagener. — Vgl. Lindley Folia Orchidacea IV. Cheiradenia: „Its true station would seem to be near my Zygopetalum gramineum, which is by no means the plant so called by Mr. H. G. Reichenbach.“ Ich habe ein Exemplar vor mir mit Herrn Lindley's Autograph (von Hartweg gesammelt), ich habe die Beschreibung des Herrn Lindley, zwei Exemplare Linden's mit der in den Orchideae Lindenianae citirten Nummer, zwei Exemplare jedesmal etiquettirt Zygopetalum gramineum Orch. Lind. von Funk und Schlim gesammelt, von Linden vertheilt — die Beschreibung passt auf sie und alle andern, die ich sah, meine Beschreibung ist völlig richtig — und doch „by no means“!

Rchb. fil. Xenia I. 67. Tab. 25. II. 2—11: Planta habitu omnino praecedentis, sed folia paulo majora, nunc imo pedalia. Flores duplo majores, illis Stanhopea pallidae Lindl. vix tertia minores, in planta spontanea aequales. Mentum paulo majus. Sepala et tepala prope praecedentis. Labellum tamen a basi late cuneata seu statim dilatata rhombeum antice rotundatum, nunc apice paulo emarginatum: dimidio antico denticulatum seu fimbriatum. Callus baseos depressus carnosus, nunc rhombeus, nunc triangulus, dimidio antico grosse dentato, sinu semper in medio. Gynostemium semiteres, postice bene rotundatum, vertice obtusatum; anguli laterales in medio gynostemio utrinque et angulo prominuli pone foveae perpendicularis basin; rostellum

tridentatum supra foveam transversam sublinearem. Carina infrastigmatica magis conspicua, quam in antecedente. Anthera oblonga antice retusa, vertice postice rotundato nunc bilobulo. Pollinia depresso ligulata basi attenuata apice obtusata quadrigemina in caudicula ligulata apice utrinque acutangula, basi acuta. Perigonium membranaceo carnosum, viridulum guttis atropurpureis; macula conspicua saepe antice in apice labelli, callus in basi labelli atropurpureus. Varietas ex horto Schilleriano perigonio intense flavido maculisque purpureis insignis. — Van Houtte Flore des Serres IX. 102.

14. ZYGOPETALUM MORITZII Rchb. fil. Mss. Huc: *Kefersteinia stapelioides* Rchb. fil. apud v. Schl. Bot. Z. l. c.:

Praecedenti subaequalis differt labello magis rhombeo, rhombi dimidio inferiore minore, callo basilari minuto, reniformi. Alae gynostemii medianae, membranaceae. Mittelamerika.

Rchb. fil. Xenia I. 69. Tab. 25. III. 12—14:

Affinis K. gramineae: labello antice egregie retuso ultra angulos denticulato, callo minuto depresso triangulo apice bilobulo in ima basi: carina infrastigmatica maxima.

Sepala et tepala an exsiccatione minus crispula? Anguli gynostemii mediani. Reliqua praecedentis. Perigonium viride brunneo asperaum. Labellum flavido albidum, maculis atropurpureis. Caracas et Merida. Septembri — Decembri ac Februario. Moritz 1099.

Obs. Nomen „stapelioidis" retinui pro *Maxillaria stapelioide* Link. — Rchb. fil.

15. ZYGOPETALUM SANGUINOLENTUM Rchb. fil. Mss. *Kefersteinia sanguinolenta* Rchb. fil. in v. Schl. B. Z. 1852. 635:

Perigonii phyllis 5 oblongo-ligulatis, acutis, membranaceis, labello flabellato, marginibus lateralibus integerrimis, margine anteriore emarginato, utrinque 3—5-lobulato, lobulis crenulato dentatis, callo basilari ligulato, antice tridentato, ima basi affixo, ceterum libero, depresso; gymnostemii alis carnosis, apicem versus sitis.

Grünlichgelb, Lippe voll kleiner Purpurflecken. Moritz.

Rchb. fil. in Bonpl. II. 15.: Caracas. 4500'. October. Wagener. — [Rchb. fil. Xenia I. 67. Tab. 25. I. 1: Labello cuneato flabellato, callo basilari ligulato antice bidentato. — Radices adventitiae cylindraceae pro planta exigua conspicuae. Folia disticha cuneato lanceolata acuta glauca. Pedunculi tenues, bi—trivaginati apice bracteati uniflori. Flores illos *Maxillariae rufescentis* Lindl. subaequantes, tenue membranacei. Perigonium connivens. Mentum parvum. Sepala latius lanceolata acuta, tepala oblongo ovata acuta. Labellum cuneato flabellatum, apice lobulatum, undulatum, denticulatum; callus basilaris ligulato laminatus antice bidentatus. Gynostemium semiteres apice rotundatum angulis statim sub fovea utrinque angulatis. Androclinium et anthera et pollinarium genetica. Carinula infrafovealis abbreviata. Flores pallide straminei seu viriduli maculis areolisque sanguineis, callo baseos atropurpureo.

Sect. 6. *Promenaea:* Columna semiteres antice plana. Labellum trilobum basi cristato tuberculatum. Huc: Promenaea Lindl. Bot. Reg. XXIX. (1843.) p. 13: Sepala patula. Labellum trilobum, medio cristatum vel multo tuberculatum. Columna brevis, semiteres. Glandula ovata. Pollinia 4, geminata, sessilia.

16. ZYGOPETALUM STAPELIOIDES. Huc: *Maxillaria stapelioides* Lk. Otto Alb. III. 52. — Lindl. Bot. Reg. 25. t. 17. et Bot. Mag. 1842. 3877:

Pseudobulbis ovatis tetragonis 1—2phyllis, foliis tenuibus lanceolatis patentibus pallide glaucis reticulatis, pedunculo diffuso bifloro, sepalis

petalisque subrotundo-ovatis acutis, patulis, subaequalibus, labello oblongo trilobo, laciniis lateralibus erectis linearibus obliquis obtusis, intermedia ovato oblonga basi cucullata, transversa, crista flexuosa carnosa intus dente carnoso ovato aucta.

Perigonium viride purpureo striolatum. Lobus labelli medius purpureus. *Promenaea stapelioides* Lindl. B. Reg. l. c.

17. ZYGOPETALUM LENTIGINOSUM Rchb. fil. Huc: *Maxillaria lentiginosa* Lindl. Bot. Reg. 1839. Misc. 98. *Promenaea lentiginosa* Lindl. Bot. Reg. XXIX. 1843. p. 13:

Bracteis late ovatis acuminatis, labelli lobo medio ovato-oblongo obtuso, crista transversa medio processu quadrato tridentato aucta, antherae apice incurvo; alioquin M. stapelioidi similis.

Brazil.

Very like P. stapelioides; but the sepals are more acute, the purple spots redder, more distinct, and less run into bars; the lip is of the same colour, as the petals and its transverse crest has a square threetoothed process in the middle.

18. ZYGOPETALUM XANTHINUM Rchb. fil. Mss. Huc: *Maxillaria xanthina* Lindl. Bot. Reg. 1839. sub t. 17. *Promenaea xanthina* Lindl. Bot. Reg. XXIX. 1843. p. 13:

Pseudobulbis ovalibus tetragonis 1—2phyllis, foliis anguste lanceolatis, pedunculis ascendentibus unifloris pedicello sterili terminatis, bractea ovata mucronata cucullata, sepalis petalisque oblongis acutis patulis subaequalibus, labello oblongo trilobo, laciniis lateralibus erectis linearibus obtusissimis integris, intermedia bilabiata, labio superiore carnoso abbreviato truncato quinquedentato, inferiore oblongo acuto.

Brazil.

Flowers yellow. Bot. Reg. XXV. 1839. 17. A plant called by Descourtils „Epidend. Jonquille" because of its colour, not its smell, for it is scentless, is an other. This was also found in the Organ Mountains by Mr. Gardner from whom I have a specimen (No. 656). Mr. Descourtils found it on the high mountains of Ilha Grande on the side towards the sea, and exposed to the rising sun.

Rchb. fil. in v. Schl. Bot. Ztg. 1852. 662: *Maxillaria guttata* Hort.

19. ZYGOPETALUM GUTTATUM Rchb. fil. Mss. Huc: *Promenaea guttata* Rchb. fil. in Bonplandia IV. 323.

20. ZYGOPETALUM ROLLISSONII Rchb. fil. Mss. Huc: *Maxillaria Rollissonii* Lindl. Bot. Reg. sub fol. 1986. et 1883. t. 46. *Promenaea Rollissonii* Lindl. Bot. Reg. XXIV. 1843. p. 13:

Pseudobulbis subrotundis compressis subbifoliis, foliis oblongo lanceolatis acutis apice recurvis, scapis subunifloris diffusis laxe vaginatis, sepalis carinatis lateralibus basi subaequalibus, petalis acutissimis, labelli lobis lateralibus ovatis angustis acutis, intermedio oblongo membranaceo apiculato margine deflexo; callo disci elevato carnoso antice transverso lobos laterales labelli conjungente, medio producto truncato tridentato et denticulis reflexis postice fornicato truncato bilobo.

Brazil.

Flowers pale yellow, with purple spots on the lip. — Lindl. l. c. 1838:

Planta omnino facie M. stapelioidis colore minus pallido caesio. Folia nunc oblonga apice acuta recurva, nunc magis lanceolata; semper sessilia. Bracteae cucullatae, acuminatae, ovariis longiores. Sepala et petala pallide flava, immaculata, conformia et subaequalia. Labellum flavescens, sanguineo guttulatum; lobis lateralibus columnam utrinque aurea ad instar adstantibus, margine posteriore crenulato. Crista labelli clavata, transversa, antice cornubus duobus clavatis armata, altero minimo interjecto, postice biloba, fornicata, utrinque dentata, denticulis quibusdam columnam re-

spicientibus latere jugi. Pollinia 4, per paria adhaerentia glandulae tenui rhomboideae.

§. 2. Racemosa.

Lindl. Bot. Reg. XXVI. 1840. 68: Zygopetalum differs from Odontoglossum by the crest of its lip being solid and transverse, by its column having no ears, and by its sepals and petals being directed upwards above the level of the centre of the flower.

Lindl. Bot. Reg. XXX. (1844). Misc. 15:

Perianthium explanatum, sepalis petalisque ascendentibus subaequalibus cum ungue producto columnae connatis. Labellum muticum, planum, indivisum, patens, ungue ascendente, crista magna transversa. Columna brevis, arcuata, marginata, saepius utrinque subdilatata; nunc in cucullum expansa. Anthera subbilocularis carnosa, nunc vertice rostrato. Pollinia 2, bipartibilia, in glandulam transversam subsessilia. Herbae terrestres, subacaules, foliis plicatis patentibus. Flores speciosi, suaveolentes, labello coerulescente.

21. ZYGOPETALUM BRACHYSTALIX Rchb. fil.:

Foliis lanceis acuto acuminatis inferne valide trinerviis, pedunculo elongato paucivaginato vaginis distantibus, racemo elongato, bracteis minutissimis, mento bene evoluto, sepalis oblongis acutis, lateralibus latioribus, tepalis ligulatis acutis, labello brevi unguiculato a basi minute cordata rhombeo flabellato obtusangulo, callo hippocrepico plicato sulcato in basi, columna brevissima. Flores illis Maxillariae rufescentis aequales. Ins. Trinitatis.

22. ZYGOPETALUM SELLOWII Rchb. fil. in Herb. Berol.:

Foliis ligulatis acutis, pedunculo paucivaginato, vaginis amplis triangulis distantibus, racemo paucifloro, bracteis ovatis acutis ovariis pedicellatis plus duplo brevioribus, mento modico, sepalis ligulatis acutis, tepalis oblongo lanceolatis acutis, labello late cuneato, dimidio antico quadrato obtusangulo, toto ungue callo depresso striato antice utrinque obtusangulo medio denticulato obtecto, columna longiuscula.

Labelli lamina in sicca planta velutina. Flores illis Maxillariae rufescentis aequales. S. de Moeda. Sellow.

23. ZYGOPETALUM MURRAYANUM Gardn. in Hook. Bot. Mag. 3674:

Pseudobulbis ovatis profunde sulcatis, foliis lanceolatis striatis, racemis plurifloris, sepalis petalisque ovato-lanceolatis acutis immaculatis, labelli lobis oblongis, lateralibus erectis, intermedio quadruplo majore reflexo albo basi purpureo maculato callo prominente sulcato.

Perigonium viride, labello albo, callo flavo, lineis 5 violaceo brunneis stricto.

Organ Mountains. 4000' ab. level of the see e Brazil. Gardner. Named by him in compliment of his steedy friend Mr. Stewart Murray of the Glasgow B. G.

24. ZYGOPETALUM MAXILLARE Lodd. B. Cab. 1776. Hook. B. M. 3686:

Pseudobulbis oblongis sulcatis, foliis lanceolatis nervosis basi attenuatis, sepalis petalisque ovato-oblongis acutis subaequalibus, labelli trilobi obtuse calcarati lobis lateralibus erectis crista anguliformi crenata maxima unitis, intermedio patente majori subrotundo.

Perigonium viride, brunneo maculatum; labellum violaceum, columna violacea.

Mr. Gardner found it on the Organ mountains in April 1828 growing upon the stems of treeferns. — Lindl. Bot. Reg. XXX. (1844.) Misc. 15.

25. ZYGOPETALUM BRACHYPETALUM Lindl. Bot. Reg. XXX. (1844). Misc. 5:

Foliis ensiformi-lanceolatis scapo elato multifloro brevioribus, sepalis petalisque oblongis obtusis, labello transverso subrotundo emarginato basi vix angustato, callo integerrimo. Brazil.

Flowers most like those of Z. intermedium, but less than half the size. Sepals and petals are short, stiff, convex, and hardly acute, very much more brown, than green, in consequence of the blotches running together. The lip is entirely covered with blue veins and spots, firm, hardly at all narrowed to the base, and very little emarginate. — Lindl. Journ. H. Soc. IV. XII. Xyl.

25. ZYGOPETALUM MACKAII Hook. B. Mag. 2748. — B. Reg. XXX. (1844). Misc. 15: known from all the genus by its blue veined perfectly smooth lip and twelobed crest. The blotches on the sepals and petals are somewhat smaller than in other species. — Huc? Lond. Journ. 672. 820. *Zygopetalum Mackaii* Hook.? Roraima Brit. Guiana. Schomburgk. — Huc: Bot. Reg. XXX. (1844.) Misc. 15: *Zygopetalum intermedium* Lodd. B. Cab. 1196. *Zygopetalum velutinum* Hoffmg. Bot. Z. 1835?

Foliis ensiformibus racemo brevioribus, sepalis petalisque oblongis acutissimis, labello subrotundo undulato basi angustato alte bilobo pubescente, callo crenulato indiviso.

Brazil. This is generally conf. in collections with Zygopetalum Mackaii, from which it is readily known by its downy labell.

Zygopetalon Mackayi Hook. Var. *parviflorum* Rgl. (*Z. intermedium* H. Petrop.) Mss. Ind. sem. b. Petrop. 1855.

Differt floribus subduplo minoribus, vix $1^1/_4$ pollices in diametro, sepalis petalisque vix undulatis, labello albo lineis tenuibus distantibus brevissime pilosis picto.

Zygopetalon Mackayi Hook. Var. *pictum* Rgl. (*Z. intermedium* H. Petrop.) l. c.:

Flores magnitudine formae genuinae, sepalis petalisque autem angustioribus, labello albo pulcherrime violaceo maculato pictoque.

Obs. Non intelligo, quomodo ill. Lindley Zygopetalum intermedium a Zygopetalo Mackaii pubescentia distinxerit, cum ipsum Zygopetalum Mackaii semper labello pubescenti non solum fuerit descriptum, sed vere gaudeat.

26. ZYGOPETALUM CRINITUM Lodd. Bot. Cab. 1682. Bot. Mag. 3402. *Zygopetalum pubescens* Hffg. Bot. Z. I. 835? Lindl. Bot. Reg. XXX. 1844. sub Misc. 15:

Foliis late lanceolatis, bracteis cucullatis, sepalis petalisque lineari-lanceolatis acutissimis, labello obovato emarginato basi longe angustato venis villosissimis, callo angusto incurvo emarginato.

Brazil. Varies with pink, blue and almost colourless veins to the lip. They all agree in having these veins quite shaggy, and a lip which instead of being broader, than long, narrows very sensibly towards the base.

Huc: *Zygopetalum microtos* v. Hffg.!

Huc: *Zygopetalum stenochilum* Lodd. Bot. Cab. 1923. Lindl. Bot. Reg. XXX. (1844.) Misc. 15:

Foliis latioribus racemo aequalibus vel longioribus, sepalis oblongis acuminatis, petalis brevioribus duplo angustioribus, labello angusto oblongo obtuso villoso, callo emarginato.

Brazil.

Sepals blotched and somewhat striped with brown. The lip is white, with blue or violet veins in the middle only. Its small petals and very narrow lip readily indicate it.

Obs. Haec planta teste cl. Bateman in Gardeners Chronicle 1862. Nr. 51. p. 1196. bene ad Zygopetalum crinitum relata: I carried off a piece of this Zygopetalum; it was the identical piece, that bore the flowerspike from which Mr. Loddiges' drawing was made; but though it bloomed frequently in my stove, its flowers were invariably those of a common form of Zygopetalum crinitum; that is, they discarded the narrow lip, that constituted the (supposed) specific distinction of Z. stenopetalum. No doubt it was casual freak, not suspected at the time, but such as we now continually meet with among Orchids.

Addantur:

27. ZYGOPETALUM PARDINUM Rchb. fil. Mss.:

aff. Z. brachystalidi: sepalis lateralibus obliquis, marginibus internis basi semicordatis, ceterum involutis, labello unguiculato flabellato rotundato, callo hippocrepico in basi ante unguem.

Flos siccus pallide stramineus. Sepala et tepala guttis multis violaceopurpureis guttata. Racemus elongatus laxiflorus. Bracteae dimidiam ovarii pedicellati longae. Andes: Western declivity. Jamieson!

28. ZYGOPETALUM COLORATUM Lind. et Rchb. fil. Mss.:

aff. praecedenti: tepalis oblongis apiculatis, sepalis lateralibus obliquis curvatis, labello pandurato apiculato, crista baseos multidentata.

Sepala et tepala extus pallide rufina; intus kermesina maculis luteis. Labellum album seu flavum. Racemus multiflorus. Bracteae lanceae dimidiam tertiamve ovarii pedicellati aequantes. — E Nova Granata iconem misit Schlim.

Juxta Sect. Keferateiniae:

29. ZYGOPETALUM FLAVEOLUM Lind. et Rchb. fil. Mss.:

Sepalis lanceis, tepalis oblongis acutis undulatis, labello oblongo bilobo lobulato crispulo ciliato, callo transverse semilunato in basi, in medio anteposito callo minore.

Flos illo Zygopetali graminei duplo major; sordide luteo cupratus. Callus et basis labelli et columna aurantiaci, maculis parvis kermesinis. Ocanna. Iconem misit Schlim.

1443 b. ERIOPSIS *Lindl.*

Bot. Reg. 1847. t. 9. adn. et tab. 18. Walp. Ann. I. 782. III. 543.

1. ERIOPSIS BILOBA Lindl. l. c. cf. Walp. Ann. III. 543.

Huc: *Pseuderiopsis* Rchb. fil.

Obs. Planta bene ludens labello. [Nunc plures flores vidi plantae Schomburgkianae ac intelligo, eam esse meram E. bilobam. Ipse ill. Lindley in herbario asservat iconem floris anomali, tantum bilamellati.

Huc: *Eriopsis Schomburgkii* Rchb. fil. Bonpl. III. 67:

aff. E. bilobae perigonio (ex sicco) valde membranaceo tenui abbreviato, labello ovato basi subcordato apice in apiculum retusum contracto, lacinulis triangulis sex collateralibus in basi, gynostemio apice utrinque minute angulato. Pseuderiopsis Schomburgkii Rchb. fil. Walp. Ann. III. 543.

2. ERIOPSIS RUTIDOBULBON Hook. B. Mag. 4437. Diagn. cf. Walp. Ann. III. 543. Rchb. fil. Bonpl. II. 281: Ocanna. Savannen und Wälder. Juni 4—6000'. N. 46. — Rchb. fil. Bonpl. III. 67; Teoramas 6000'. März. Auf der Erde. Wagener. — Pescatorea t. 20. (sub E. biloba).

Obs. Falsissime Gardn. Chronicle 1849. 216: „The Eriopsis rutidobulbon of Bot. Mag. is nothing whatever except E. biloba well grown."

3. ERIOPSIS SCEPTRUM Rchb. fil. Warscew. Bonpl. II. 98:

Labelli disco utrinque una lamella triangula prostrata aucto, ceterum laevi.

Perigonium patulum, phylla 5 oblonga apice obtusa seu obtuse apiculata, labellum ima basi unguiculatum, trifidum ad medium usque, laciniae laterales semireniformes, sinu acutangulo inter illas et unguem laciniae mediae, lacinia media lato unguiculata apice obtusa triangulo dilatata, antice retusa, nunc bilobula, basis labelli punctato subvelutina, discus inter lacinias laterales utrinque unilamellatus, lamella utraque ligulata obtusa extrorse antrorsa apice obtusa, basi tantum cum labello connata, unguis labelli praeter nervos elevatulos ac puncta laevis; gynostemium incurvum apice

utriaque angulatum. — Blüthenstiel ellenlang, vielblüthig. Blüthen so gross etwa, wie die der in Bot. Reg. abgebildeten *E. biloba* Lindl., nach Farbenskizze gelb, roth gerandet, Lippenvorderstück weiss, Hinterstück gelb, beide blau punktirt. - Peru. v. Warscewicz.

4. ERIOPSIS SPRUCEI Rchb. fil. Mss.:

aff. E. Sceptro: tepalis angusto ligulato falcatis, labelli lobis posticis semiovatis, lobo antico cuneato rotundo sessili (nec ungue elongato fulto, ut in illa), carinis triangulis geminis medium versus (nec in basi, uti in E. Sceptro).

Rete nervorum valde insigne. Nam inter nervos labelli externos nervuli transversi quasi rete efficiunt. Tales nervuli transversi in Eriopside sceptro desiderantur.
Rio Negro. Spruce 2390!

1443 e. CHONDRORRHYNCHA *Lindl.*

Orch. Linden p. 12. (1846.)

Epiphyta ebulbis. Scapus radicalis explanatus uniflorus. Flos explanatus, speciosus. Sepalum dorsale carinatum, dorso columnae insertum, lateralia basi oblique recurva. Petala membranacea, basi oblique inserta, sepalum dorsale et lateralia connectens. Labellum maximum, cucullus indivisus cum pede haud producto columnae articulatus. Columna elongata, semiteres; rostellum lineare, cartilagineum, elongatum. Pollinia 4, cereacea, inaequalia, concava, plana, glandulae longae acuminatae molli annexa.

1. CHONDRORRHYNCHA ROSEA Lindl. l. c.:

Folia spithamaea, papyracea, obovata, acuta. Flos candidus, roseo suffusus, 2½" latus. Sepalum dorsale brevius; lateralia lanceolata, sesquipollicaria. Petala obovata, plana, obtusa, sepalis aequalia. Labellum obovatum, venosum, margine crispum. „A bulbless epiphyte from the deep and damp forests of Merida. Flowers rosy white. Jaji at the height of 5000'. Juli 1842." (Nr. 651.) This genus seems to be allied to Heicia and Trichopilia; but the extremely oblique insertion of the sepals is a most remarkable feature, as is the long cartilaginous bristlelike rostel, which is covered by a broad soft acuminate gland.

Rchb. fil. Bonpl. II. 280: Diese Pflanze hat uns schon früher Herr Linden wiederholt bestimmt so bezeichnet. Wir erinnern jedoch, dass dieselbe durchaus ein sehr deutliches Kinn besitzt, welches freilich leicht übersehen werden kann, da die Rückenwand der äussern Sepala mit einer Fuge an dem äusseren Fruchtknoten anliegt. Alle übrigen Verhältnisse passen genau; nur sitzen die höchst ungleichen Pollinia auf einer rundlichen Caudicula, der eine runde sehr spitze Glandula anhaftet. — Die Verwandtschaft mit Trichopilia wird natürlich durch obiges Verhältniss gestört. — Ocanna. Juli. 6000'. Nr. 34. Schlim.

2. CHONDRORRHYNCHA? Rchb. fil. Bonpl. III. 67: Es liegt eine hübsche Art vor, welche ohne allen Zweifel neben die Pflanze Schlim Nr. 34 gehört. Die Blüthe ist sehr zart und hat die Grösse derer der Warscewiczella discolor. Sie war nach unseres Freundes Wagener Angabe violett und zeichnet sich namentlich durch die stark gezähnelte und krause Lippe aus. Aspasica. Santa Marta. — Unsre Zweifel gegen die Identität mit Chondrorrhyncha, die Herr Linden behauptet, oder, falls diese begründet, gegen die Richtigkeit der Diagnose von Chondrorrhyncha haben wir bereits angegeben. Wir können demnach jetzt die Pflanze nicht sicher bestimmen. Hier fügen wir die nach Schlim. 34 entworfene Beschreibung bei. Gen. aff. Lycasti polliniis quaternis sessilibus in caudicula brevi rotundata cum glandula magna molli. Planta ebulbosa. Perigonii sepalum supremum oblongum basi cuneatum, apice

acutiusculum, in sicca planta nervosum, carinatum; sepala lateralia subaequalia, sed deorsum incurva, subfalcata, cum tepalis vix imbricantia, ima basi infera obtusangula libera, tantum basi superiori cum pede gynostemii cohaerentia. Tepala oblonga, basi subcuneata, apicem versus dilatata, imo apice retusa crispula, basi valde obliqua cum sepalis vix imbricantia, illis latiora. Labellum in pede gynostemii Zygopetali more, a cuneata basi flabellatum, dilatatum, marginibus anterioribus crispulum, microscopice denticulatum, apice retuso subtrilobum, callo antrorse libero laminaeformi apice tridentato in medio disco. Gynostemium semiteres, margine anteriori superne marginatum, infra antice omnino planum, nec concavum. Androclinium obliquum marginatum. Rostellum tridentatum dente medio corneo, lineari longe producto; dentibus lateralibus membranaceis supra foveam reniformem flexis. Anthera oblonga, plana, postice emarginata, semibilocularis. Pollinia inaequalia, concava, oblique pyriformia, depressa in caudicula obtuse pentagona, cui glandula infra adhaeret mollis.

1443. WARREA *Lindl.*

Bot. Reg. XXIX. (1843). p. 14.

Flores subglobosi, subregulares, mento brevi rotundato. Labellum continuum, indivisum, lineis elevatis carnosis in medium. Columna semiteres, clavata. Pollinia 4, per paria in caudiculam brevem linearem inserta, glandula triangulari.

Herba terrestris, pseudobulbosa. Folia arundinacea. Scapus radicalis elatus apice racemosus. Flores magni speciosi.

1. WARREA TRICOLOR Lindl. Bot. Reg. XXIX. (1843.) p. 44. — *Maxillaria Warreana* Lodd. Bot. Cab. 1884. L. O. 148. — Bot. Reg. XXXI. 1845. sub 28:

Scapo multifloro, foliis longiore, sepalis ovatis basi subaequalibus, petalis minoribus conformibus, labello brevissime unguiculato obovato-oblongo indiviso cucullato obtuso jugis tribus in medio elevatis carnosis, superficie laminae seriatim corrugata marginibus planis.

Brazil.

Sepals yellowish brown, lip yellow at base, pallid at the end, rich purple in the middle.

Lindl. Bot. Reg. XXIX. l. c.: Folia oblongo-lanceolata acuminata plicata, scapo radicali erecto vaginato multifloro, foliis longiore. Sepala ovata concava acuta basi subaequalia, petalis minoribus conformia, labello brevissime unguiculato obovato oblongo indiviso cucullato obtuso, jugis in medio elevatis carnosis, superficie laminae seriatim corrugata marginibus planis. Sepala fulvo lutea lateralibus basi parum inaequalibus. Labellum basi luteum, apice pallidum, medio purpureum, cum columna subarticulatum.

Maxillaria Warreana Lindl. Hook. B. M. 4235:

Pseudobulbis oblongis attenuatis articulatis, foliis subito lanceolatis basi longe attenuatis nervosis plicatis, scapo radicali erecto elongato vaginato multifloro, floribus subglobosis, sepalis petalisque subaequalibus rotundato-ovatis concavis acutis, labello obovato basi cucullato intus medio jugis tribus elevatis carnosis, apice dilatato sublobato supra plurilamellato, columna inclusa.

S. Martha. New-Granada. Purdie.

Huc: *Warrea bidentata* Lindl. Bot. Reg. XXX. (1844). Misc. 78:

Bracteis pedicello quadruplo brevioribus, labelli apice bidentati venis valde convexis flabellatis altis intermedia duplo majore.

At first sight we took this for Warrea tricolor. Its lip is however regularly slit at the end, the veins are much more convex, and the central plates thinner and deeper, than in that species. The bracts too are not half the length. Caracas: sent to Rucker.

Lindl. Orchid. Lind. 1846, p. 18: „On the ground in the thick forests of the foot of the peak of Tolima, at the height of 4000'. Stem erect 2—3' high. Petals white and pink. Lip spotted with purple. Febr. 1842." N. 1283. — Lindl. in Paxt. Fl. G. I. p. 73. 108. Misc. Xyl. 47.: *W. Lindeniana* Henfrey in Gardn. Mag. Bot. 177: New Granada. Habit of W. tricolor; flowers pale cream colour, with a purple lip; fig. 47. lip. magnif. Not a native of Peru, but found by Mr. Lind. pp. of Orch. Lind. — It is said to have some pink in the flower when wild; habit of W. tricolor.

Warrea tricolor Lindl. Rchb. fil. Xenia I. Tab. 24. I. II. 1—9. p. 63: Caulis tumidus bene foliosus post folia oblongo lanceolata acuta basi cuneata plicata dejecta cylindraceo pseudobulbosus. Pedunculus axillaris in vagina, validus, basi parce squamatus, superne dense racemosus. Bracteae ovatae acutae abbreviatae. Flores carnosi magni speciosi sensim floridi nec coaetanei, clausi seu semiclausi. Ovaria cylindracea pro flore sat gracilia ascendentia apice curvata torta. Mentum magnum. Sepalum summum oblongo lanceolatum, subgaleatum, acutum. Sepala lateralia altiora per nervum medium obtuse carinata. Tepala cuneato oblonga acuta. Labellum circuitu rhombeo ovatum, subcucullatum, antice sinubus insilientibus plus minus trilobum, lobus medius productus sinuato bilobulus, superne rugoso verruculosus, carina magna dorso anceps, lateribus bisulcata, antice trilobula a basi brevissime unguiculata cordata per discum. Gynostemium semiteres, superne curvatulum, basi carina prominente signatum. Androclinii limbus prominulus obscure transiens in alas descendentes supra basin utrinque obtusangulas. Androclinium fornicatum figurae semilunaris; lobi laterales descendentes pone margines laterales foveae stigmaticae, lobus medius: dens lineari subulatus. Fovea triangula, basi labio prominulo signata. Anthera depressa obtuse triangula pariete posteriori subpersistente bivalvis. Pollinia obtusangula obtriangula, per paria incumbentia posticis brevioribus in caudicula obtuse rhombea superne peltatim affixa, quae inferne viscinosa. Flores prima anthesi albi, dein ochroleuci, demum intense flavi tepalis semper pallidioribus. Labellum emissis marginibus posticis albis purpureum, venis obscurioribus radiantibus. Gynostemium album, antice purpureo striolatum.

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2. WARREA CYANEA Lindl. Bot. Reg. XXX. (1844). Misc. 3:

Spica brevi, bracteis ovarii longitudine, sepalis ovatis, petalis subconformibus, labello subrotundo-cuneato apiculato undulato lineis quinque elevatis.

The purest blue known in the vegetable kingdom colours the lip of this beautiful flower; which is otherwise white. It has quite the habit of W. tricolor, but is very much smaller in all its parts. Its most dist. character is found in the form of its lip, which has a distinct point, and 5 ribs, not 3, near the base. Messrs. Loddiges imported it from Columbia. — B. Reg. XXXI. (1845). Tab. 28.

1443. ZYGOSEPALUM *Rchb. fil.*

in De Vriese Kruidskdge Archief 1857.

Rchb. fil. in v. Schl. Bot. Ztg. 1852. 668. Zygopetali Sectio (an Genus?): Zygosepalon. Androclinium cucullatum. Anthera longe apiculata. Rostelli trilobi lobi aequales. Caudicula cum glandula stigmatis foveam tegens.

Obs. Glandula pulchre emarginata genus a Batemania bene eximit.

1. ZYGOSEPALUM ROSTRATUM Rchb. fil. l. c. apud De Vriese. Huc: *Zygopetalum rostratum* Hook. Bot. Mag. 2819. LO. 188. Rchb. fil. apud v. Schl. B. Z. 1852. 668:

Perigonii phyllis subaequalibus lanceolatis acuto-acuminatis; labelli lamina oblongata, obtusata, nunc acuta, imo trilobula, callo hippocrepico multicrenulato.

Die Trugknollen viel breiter. Blüthen doppelt so gross. Die Hüllblätter grün, mit Braun angehaucht. Die Leiste auf der Lippe vielkerbig, bald rosa, bald blau. Hierher Gardner's Exemplare. — Herr Kegel sammelte bei Mariepaston (also 40 Meilen weiter im Innern des Landes) die alte Art, das *Zygopetalon rostratum* Hook., wie ich aus einem meisterhaften Originalbilde des Hrn. Stroeband sehe.

2. ZYGOSEPALUM KEGELII Rchb. fil. l. c. apud De Vriese. Huc: *Zygopetalum Kegelii* Rchb. fil. apud v. Schl. B. Z. 1852. 668:

Perigonii phyllis subaequalibus lanceolatis acutis, labelli lamina transverse quadrata obtusangula medio antice apiculata, callo hippocrepico, paucicrenulato.

Trugknollen schmal, länglich. Die Hüllblätter blassgrün, braungefleckt; Lippe weiss mit violetten Strichelchen. Säule weiss. Blüthen so gross, wie die des Z. maxillare. Vom Herrn Universitätsgärtner Kegel in Surinam bei Geiersvlyt und Tourtonne entdeckt, woher es bei Hrn. Van Houtte blühte.

1444. CYRTOPODIUM *RBr.*

Hort. Kew. ed. 2. V. 216.

1. CYRTOPODIUM CARDIOCHILUM Lindl. Journ. H. S. IV. 266. (1849):

Racemo multifloro, bracteis ovato oblongis membranaccis, unicoloribus, sepalis petalisque oblongis obtusiusculis his (immaculatis) basi angustatis, labelli sessilis cordati trilobi lobo intermedio cordato rotundato margine tenue subplicato lateralibus acinaciformibus erectis, crista pulvinata serie simplici verrucosa.

At the base of the lip is to be found a convex warted crest unknown in C. Andersoni, and at the end of the lip is no trace of the tubercles so conspicuous on the edges of C. punctatum. Hanbury. — Paxt. Mag. XVI. 369.

2. CYRTOPODIUM BLANCHETII Rchb. fil. in Linnaea XXII. 852. Cf. Walp. Ann. III. 552

3. CYRTOPODIUM PUNCTATUM Lindl. Orch. 188. Hook. Bot. Mag. 3507:

Bulbis elongatis, foliis linearilanceolatis tenuiter acuminatis, scapo paniculato, bracteis magnis membranaceis, sepalis petalisque undulatis acutis maculatis, labello stipitato profunde trilobo, lobis lateralibus obovato-cuneatis incurvis, intermedio late obcordato margine granuloso, disco basi calloso.

Helleborus ramosissimus cauliculis et floribus maculosis. Plum. Sp. p. 9. t. 187. Flores sulphurei rubro picti.

Lindl. Sert. 12: Bright, deep crimson stains with which bracts and flowers as well as flower stems are richly variegated. St. Domingo. Ch. Mackenzie. Mexico: basaltic rocks at Malpayo de Naulinge in tierra templada, flow. April. Schiede! Brazil. Gardner. — Oncidium palmophilum palmis aliisque arboribus parasiticum sylvae Catingas, prov. Bahiensis ad Rio de Contas 1965. Mart. Herb.

Scape 2—3" round, branched above the middle, dotted with purple, with few membranous scales. Flowers about an inch apart, nearly 2" diam. Sepals and petals spreading, reflexed, former oblong lanceolate, undulate, acuminate, acute, greenish yellow, blotched with crimson, latter bright yellow, of nearly the same size and form, but less undulated and rather broader, with a few crimson spots near the base. The

lip ⅓" long, fleshy, shortly unguiculate with a bright deep, yellow ground colour, trilobed, lateral lobes obovate, rounded, rather wavy and deep crimson; middle lobe broader than long, emarginate, dull crimson and closely tuberculate at the margin, the disk is little spotted and banded with yellow, and covered with pale yellow granules, which are collected into a circle in the centre and are also a little dispersed over the unguis. Column is green.

Rchb. fil. Bonpl. II. 19: Caracas. Wagener. Bonpl. III. 67. N.-Granada. Wagener.

b. bracteatum Rchb. fil.

Huc: *Cyrtopodium bracteatum* Linden herbar. Lindl. O. Lind. p. 23:

Racemo simplici, bracteis magnis membranaceis, labelli disco pulvinato verrucoso lobis lateralibus oblongis undulatis versus basin tuberculatis, intermedio transverso truncato indiviso margine in papillas soluto.

Scorching Savannahs, near Merida at the height of 5000'. Jul. Flowers and bracts bright yellow spotted with red." (N. —). — Differs from C. punctatum in its simple raceme, and in the form and markings of the lip.

4. CYRTOPODIUM ANDERSONI RBr. l. c. Lindl. Bot. Reg. XXVII. (1841.) 8:

Bracteis oblongis patulis concavis, sepalis petalisque obovato-oblongis planis, labelli lobis rotundatis, lateralibus erectis, intermedio concavo basi sulcato apice crenulato, disco nudo.

Tylochilus flavus Nees in Verhandl. des Vereins zur Bef. des Gartenb. VIII. 191. t. 3.

Tropical parts of America, where from the fleshy stems the shoemakers obtain a kind of paste or glue, which they use for the purpose of their art. There are 2 var. in our coll., one, which is that now fig., has a branched inflorescence; the other has a perfectly simple one, with much larger flowers; the latter may possibly be the C. glutiniferum, a plant I am unacquainted with.

Hook. Lond. Journ. I. p. 188: On rocks, on wood, common on the mountains about Rio. Sept. Gardner 122.

Huc: *Cyrtopodium flavum* Mutel Mem. Orch. p. 141. (ego non vidi. Rchb. fil.) — Lond. Journ. 1843. 672: On the river Miejore. Schomburgk! — Bot. Reg. XXVII. (1841). Misc. 49: De flore educando. Planta gemmifera in alia terra ponatur remotis radicibus vetustis.

5. CYRTOPODIUM CRISTATUM Lindl. Bot. Reg. XXVII. (1841.) sub t. 8:

Racemo simplici, bracteis concavis patulis setaceo acuminatis, labelli lobis subaequalibus, lateralibus erectis, intermedio concavo integro disco nudo, crista oblonga carnosa, inter lobos laterales.

Lindl. in Hook. Lond. Journ. 1843. II. 672: On rocks and trees. British Guiana. Schomburgk 628.

6. CYRTOPODIUM PARVIFLORUM Lindl. sp. in. Hook. Lond. Journ. II. (1843). p. 672.

Sepalis petalisque undulatis, labelli lobis lateralibus falcatis obtusis, intermedio cuneato dilatato, basi tuberculato aequalibus.

Flores C. cristato similes, sed duplo minores. Et labello omnino diversum. — On sand, British Guiana, Schomburgk N. 617.

1446. CYRTOPERA *Lindl.*

L. O. 189.

1. CYRTOPERA FLAVA Lindl. O. 189. Huc: *Cyrtopera Cullenii* R. Wight Ic. V. 1754:

Leaves oblong, lanceolate, plaited, scape slender, angular, somewhat drooping towards the apex; flowers numerous, loosely racemose, long

pedicelled, bracts ovate, subulate, sepals obovate lanceolate, narrower, than the obovate very obtuse petals, lip threelobed, middle one somewhat smaller, threecrested. Travancore.

Flowers yellow and the scape appear before the leaves, but the appearance of the plant so far as I can learn from comparisou with Dr. Royles figure is different from C. flava. Some leaves 2' in length. I am indebted to General Cullen, resident of Travancore for my specimen of this gorgeous plants.

2. CYRTOPERA FUSCA R. Wight Ic. V. 1690:

Leaves long lanceolate, plicate, scape straight manyflowered, sepals linear lanceolate, acute, longer than the broader ovate lanceolate petals, lip obsoletely threelobed, lateral lobes short roundish, middle one oblong, undulate, pointed, the disk covered with minute papillae, base of the column prolonged, obtuse, forming with the lip a large inflated spurious spur. Sepals dull reddish-brown or lilac, ascending petals and lip much paler.

Rocky clefts in rich vegetable soil by the Kartairy falls near Kaitie. Neilgherries. Rhizome very large, somewhat ovate and flattened; the scapes and flowers appear first and are succeeded by the leaves, scapes 12—18 inches high, and in large specimens exceeding to 2 feet. May. June. Also rare in rocky clefts on the top of the high hill east of Coonoor.

3. CYRTOPERA SQUALIDA Rchb. Bonpl. 1857. p. 38. Huc: *Eulophia squalida* Lindl. Bot. Reg. XXVII. (1841.) Misc. 164:

Foliis lato-ensiformibus 5-nerviis, spica multiflora, floribus inferioribus remotioribus, bracteis ovatis acuminatis ovario acutangulo brevioribus, labello oblongo trilobo laciniis rotundatis intermedia crispa emarginata calva venis pluribus parallelis elevatis, calcare brevi, anthera obsolete emarginata.

Cuming. Lodd. Leaves like these of a Bletia and a stout erect scape $1^1/_2$' high with dingy pallid flowers, the lowermost of which are very remote from the uppermost. The lip has no appendages, but is strongly marked by elevated veins and it is entirely confluent with the column at the base.

4. CYRTOPERA LONGIFOLIA Rchb. fil. C. *Woodfordi* Lindl. — Orch. Lind. p. 10; damp forests of the Sierra Nevada, where it chiefly occurs on the outskirts. Rhizome bulbous creeping. Stem a yard high. Sepals yellowish green. Lip purple. Merida 5000'. Aug. N. 662. — Rchb. fil. Bonpl. II. 19: Dendrobium longifolium Humb. Kth. Govenia barbata Endl. Pöpp. — anno 1838. Savannenpflanze. Caracas. Wagener.

Var.? pachystelidia Rchb. fil. in v. Schl. B. Z. 1852. p. 734: Validissima; gynostemio breviori, latiori, lamellulis in lobo medio haud linearibus, sed latioribus, saepe bifurcatis. — [Ohne die bei den Cyrtopera wichtige Anthere. — Chiriqui. St. Peter. v. Warscewicz.

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5. CYRTOPERA FOLIOSA Lindl. Hook. Comp. B. Mag. II. 203:

Vaginis scapi foliosis, foliis strictis ensiformibus, racemo multifloro, vagina suprema paulo longiore, (bracteis acuminatissimis laceris floribus longioribus), perianthii carnosi laciniis lanceolatis acutis subaequalibus, labello concavo subrotundo trilobo, lobo intermedio emarginato medio parce papilloso basi tricristato.

Inter Basche et Omtala in graminosis. Drege.

Caulis sesquipedalis fere ad racemum usque vaginis foliosis instructus; lamina vaginarum ensata. Folia scapi longitudine, stricta, ensiformia, plana, striata, costis tribus conspicuis in sicco 4 lineas (verosimiliter semiunciam) latis. Racemus $2^1/_2$

poll. Bracteae flassae et quasi ramentaceae; an casu? Flores valde carnosi, subglobosi. Sepala lateralia basi producta, ob pedem columnae, qui brevior est, quam in pluribus aliis speciebus. Labellum quodammodo obovatum, concavum, carnosissimum, tuberculis 3 oblongis contiguis ad basin cristarum ultra tubercula parce papillosum.

I have only seen a single specimen of this remarkable plant, which appears to have been only once found by Mr. Drége. It will stand next C. plantaginea.

6? CYRTOPERA PEDICELLATA Lindl. Orch. 190. — Lindl. in Bot. Mag. Comp. II. p. 204: It is very singular, that Cyrtopera pedicellata, the Satyrium capense of Linnaeus, which Thunberg says grows near Zeekorivier and elsewhere, has not yet been found in any of the rich collections of Messrs. . . . . .. nor in the old herbaria of Vahl and Hornemann. The specimen in the Linnaean Herbarium, without leaves, shows that I was right in considering it a Cyrtopera. It is very distinct from any thing else, and is perhaps the smallest of the genus. It is most like a small state of Eulophia tristis.

Obs. Planta hic linquatur. Non videtur esse illa, quam sub Cymbidio pedicellato descripsi.

1447. LISSOCHILUS *R. Br.*

In Lindl. Coll. Bot. 31.

1. LISSOCHILUS SPECIOSUS RBr. l. c. Lindl. Comp. Bot. Mag. II. p. 204: Mr. Burchell found L. sp. near Uitenhage 4262.

Obs. Nescio, numne huc pertineat Satyrium giganteum L.? — Non liquet. Cl. Lindl. Comp. B. M. II. 204. Eulophiam fuisse credit.

2. LISSOCHILUS STREPTOPETALUS Lindl. Bot. Reg. 1002: „In one of the flowers on our specimen, there is a remarkable monstrosity. One of the segments of the inner perianth is reflected and assumes the appearance of the outer perianth, and on each side of the perfect anther there is an abortive, but distinct appearance of 2 others, making the whole number of 5". Graham. — Lindl. Bot. Mag. Comp. II. p. 204: Sepala et labellum paulo acutiora. Vischrivier, Zwartkoparivier. Drege.

3. LISSOCHILUS ROSEUS Lindl. Bot. Reg. XXIX. (1843.) p. 25. Misc. 37. *Dendrobium roseum* Sw. in Pers. Syn. p. 323:

Foliis lato-lanceolatis erectis plicatis, scapo squamis lanceolatis acutis membranaceis distantibus vaginato, racemo dense oblongo, bracteis ovatis acuminatis ovario brevioribus, sepalis spathulatis acutis, concavis reflexis, petalis oblongis apiculatis, labelli trilobi lobis rotundatis, intermedio emarginato cum mucrone, disco lamellis tribus undulatis serrulatis, tuberculo parvo utrinque.

Terrestr. imported by Sigismund Barker Esq. from Sierra Leone. It has large plaited leaves and rich rose-coloured flowers in a close raceme at the end of a scape between 3 and 4' high. Although the other species of the genus have flowers in which yellow in the predominant colour, this has scarcely any trace except in the middle of the lip.

Bot. Reg. XXX. 1842. Tab. 12: Sepala violaceo brunnea, petala rosea, labellum roseo kermesinum, extus basi flavum, cristis flavis.

4. LISSOCHILUS PARVIFLORUS L. O. 191. Lindl. Bot. Reg. XXIV. 1838. Misc. 14: Flowered Decb. in the coll. of Lodd., who obt. it from Algoa Bay. Leaves plaited like those of a Bletia and varied in breadth from $\frac{1}{2}$ — $1\frac{1}{2}$". Sepals are a dull greenish purple; petals were much broader and of a rich brownish red, rather strongly veined. The labellum was yellow, with the lobes light purple. Not to be compared in point of beauty with L. speciosus and streptopetalus.

5. LISSOCHILUS PLATYPETALUS Lindl. Comp. B. M. II. 204: *

Foliis ensiformibus canaliculatis recurvis scapo triplo brevioribus, vaginis scapi laxis cucullatis, scapo laxo multifloro, sepalis ovatis, acutis reflexis petalis subrotundis apiculatis planis triplo brevioribus, labello carnoso hastato leviter saccato, lobis lateralibus parvis triangularibus, intermedio oblongo tuberculis tribus crenatis seriebusque 5 papillarum in disco.

In collibus calcareis Kopje; Zuurebergen in saxosis. Drege.

Pedalis sesquipedalisque. Scapus laxe et distanter vaginatus. Racemus laxus, 10—12florus. Labellum lineari-oblongum, margine membranaceum; cyatho parvo trituberculato circa faucem sacculi; discus apice tuberculis 3 oblongis carnosis crenatis inter quae et saccum adsunt papillae numerosae sub 5 seriatae demum in unam connatae, quae sacculum attingit.

6. LISSOCHILUS AEQUALIS Lindl. Bot. Mag. Comp. II. p. 204:

Foliis ensiformibus acutis recurvis scapo multifloro brevioribus, sepalis petalisque subaequalibus ovato-oblongis, obtusis, labelli lobis lateralibus rotundatis, intermedio oblongo obtuso sulcato.

Zuurebergen in graminosis. Drege. Scapus 1½ pedalis, foliis longior. Bracteae acuminatae, ovarii longitudine. Racemus sub 8 florus.

7. LISSOCHILUS CALOPTERUS Rchb. fil. Bonpl. III. 218:

Valde aff. L. specioso R. Br. foliis linearibus angustissimis, racemi secundi floribus illius triplo minoribus, sepalis ovatis acutissimis quam tepala subtriplo brevioribus.

Folia ultrapedalia, quasi juncea, forsan subteretia? etenim adeo complicata, ut aegre tantum possit canalis reperiri medius — tum ubi subplana forsan tres quatuorve lineas lata. Pedunculus bipedalis. Vaginae lanceolatae acutae latae nervosae; altera in basi, altera sub medio; duo superiores linearilanceae. Racemus elongatus. Bracteae linearilanceosubulatae ovaria pedicellata semiaequantes. Tepala ovata acutiuscula (nec elliptica!). Labelli calcar conicum abbreviatum; lobi laterales rotundati replicati, lobus medius ovalis obtuse acutus ascendens margine plicato undulatus. Lineae carnosulae contiguae varicosae a medio disco in basin: laterales nervi nunc etiam incrassati. Gynostemium brevissimum truncatum. Ex Africae ora orientali. „Blüthen goldgelb. Fetter Marschboden. April 1846. Dr. Peters. (Mus. Berol.)“.

1448. NOTYLIA *Lindl.*

Bot. Reg. 930. — Rchb. fil. Xenia Orch. I. p. 46. sq.: monographia, quam hic edimus additis diagnosibus originalibus.

A. Folia equitantia ensata.

1. NOTYLIA BICOLOR Lindl. in Benth. Plant. Hartw. 1842. p. 93. Rchb. fil. l. c. 46:

Gynostemio medio angulato, labello libero breviter unguiculato ligulato ante apicem sagittato, apice setaceo ecarinato, longiore.

Folia acinaciformia, acutiuscula, ornithocephalina. Pedunculus tenuis capillaris apice racemosus (—10 florus). Ovaria capillato pedicellata. Perigonium tenuissimum. Sepala lineari setacea, inferiora ima basi coalita, alba. Tepala paulo latiora, breviora, lazulino violacea. Labellum cf. supra, ejusdem coloris. Anthera maxima dimidium gynostemium excedens. — Plantula sesquipollicaris; sepala subsemipollicaria.

In montibus Comalapan in Quercubus. Hartweg!

Lindl. l. c.: *Notylia bicolor* Lndl. sp. n.:

Foliis brevibus equitantibus acutis, scapo erecto multifloro, racemo subrotundo, sepalis lateralibus fere liberis petalisque lineari-lanceolatis acuminatissimis, labello unguiculato sagittato acuminatissimo.

Species perpulchra, sepalis pallidis, labello petalisque violaceis. Folia, scapus spicaque simul juncta vix 2 uncias aequant, sepala tamen semipollicaria.

2. NOTYLIA WULLSCHLAEGELIANA Focke in v. Schl. Bot. Z. 1853. p. 343. R. fil. l. c. 46:
Gynostemio apice angulato, labello basi adnato carinaeformi utrinque angulato carinato, apice hastato erosulo gynostemio suo breviori.

Folia acinaciformia, longiora, apice nunc subfalcata. Pedunculus tenuis apice racemosus seu paniculatus. Bracteae lineari setaceae, brevissimae. Sepala lineari setacea; lateralia labello supposita, parallela, albidoflaveola, tepala vix latiora, breviora, apice setaceo falculata (semper?) alba, purpureo punctata. Labellum album supra descriptum. Gynostemium apice inflexum, incrassatum, pulvinari androclinii magno. Anthera purpureo punctulata, gynostemii tertiam aequans.

Para. Onoribo. Wullschlaegel!

Focke l. c.: Foliis cultriformibus equitantibus purpureo-reticulatis, scapo axillari corymboso paucifloro foliis longiore, sepalis lanceolatis acuminatis, lateralibus ima basi connatis approximatis, petalis linearibus, labello hastato aristato-acuminato unguiculato basi biaurito, floribus diaphanis. Radices crassiusculae, albidae. Folia cultriformia, subcarnosa, acuta, basi vaginantia, venis purpureis elevatis eleganter reticulata, 2 centim. longa, 5 mm. lata, in flabellis 3—4-foliatis congesta. Scapus axillaris, debilis, nutans, apice corymboso-racemosus, 6-florus, purpurascens, bracteatus, foliis longior, 4 centim. longus. Perianthium membranaceum, diaphanum, patulum. Sepala lanceolata, sensim aristato-attenuata!, planiuscula, apice recurva, virescentia; supremum concavum; lateralia ima basi connata, approximata, centimetri longitudine. Petala linearia, acuta, vix breviora, plana, incurva, apice recurva, albida, maculis 5—6 purpureis in una serie positis picta. Labellum patens, hastatum, marginibus subincurvis, aristato-acuminatum, unguiculatum, ungue insidens pedunculo incurvo, ibique tuberculo inter 2 aures laterales rotundatas deflexas purpureas praedito, petalis concolor, 2—3 maculis purpureis in disco et ungue pictum. Columna gracilis, elongata, stricta, teres, purpurascens. Stigma verticale. Anthera dorsalis, unilocularis, oblonga, incurva, compressa, purpurea, cum stigmate parallela. Clinandrium resupinatum, postice marginatum, falcatum. Pollinia 2 libera, ovata, compressa, erecta in caudicula lineari-elongata, apice quadrato-dilatata. Glandula ovalis. Ovarium breve, sulcatum, purpurascens. Pedunculus floris longitudine. Herba nana epiphyta. Habitat in districtu Para Surinamensi. Florebat Novembri. Flores inodori pro statura plantae satis magni.

B. Folia plana.

aa. Labellum basi carinatum seu callosum.

1) Gynostemium velutinum.

3. NOTYLIA PUBESCENS Lindl. Bot. Reg. XXVIII. 1842. Misc. 72. Rchb. fil. l. c. 47:
„Foliis oblongis subundulatis subconcavis, racemo folio longiore pendulo, labello rhomboideo basi carinato et columna pubescentibus, sepalis lateralibus basi tantum connatis."

„Flores aurantiaci, odorati. Brasilia." Loddiges. — Sepala libera? Gynostemium rectum?? Specimen cultum huc videtur referendum excellens pedunculo subpedali gracili multifloro. Flores tenelli, haud parvi, aurantiaci. Sepala lateralia bifida, apicibus reflexis. Labelli unguis carinatus; lamina angusto rhombea quadruplo brevior Linea laminae media velutina. Gynostemium labello prope duplo brevius, apice paulo curvulum, velutinum. Ex horto Schilleriano.

2) Gynostemium glabrum.

— Omnes species huc retuli, quarum gynostemia „pubescentia" non expresse commemoravit ill. auctor. An vere huc pertineant, nescio, cum nihil certi de indumento dixerit. —

4. NOTYLIA PUNCTATA Lindl. Gen. Sp. Orch. 182. (an etiam Bot. Reg. 930?) Rchb. fil. l. c. 47:

„Labello unguiculato cordato ovato obtuso basi calloso margine reflexo, sepalis petalisque obtusis, rhachi flexuosa."

Lindl. Bot. Reg. XXIV. 1838. Misc. 166. *Pleurothallis punctata* Ker. (Gawler) Bot. Reg. IX. 759. 1838. *Gomeza tenuiflora* Lodd. fid. Lindl. Candida. — „Ex insula Trinitatis" (si fabula vera, cum species multae caracasanae in hortos Trinitatis insulae advectae in Angliam missae pro trinitensibus habitae fuerint). — De gynostemio ill. auctor tacet.

Specimina culta, quae huc pertinere arbitror ita definienda: pedunculo brevi crasso plus minus densifloro, sepalo summo lanceo obtuse acuto, inferiori oblongo lanceo apice fisso bis acuto, tepalis sepalo impari aequalibus subbrevioribus, labelli ungue lamina anguste triangula triplo breviori, per unguem in laminam carinato, gynostemio aequilongo, apice inflexo.

Huc Lindl. Bot. Reg. XXIV. 1838. Misc. 166:

Labello unguiculato cordato ovato obtuso basi calloso, margine reflexo, sepalis petalisque obtusis, rhachi flexuosa.

I believe, the original species is lost, and its place has been taken by other species resembling it enough to be mistaken for it. At least, I must confess, that I had regarded specimens sent me from time to time by Mr. Bateman, Mr. Barker, Messrs. Loddiges and others as mere varieties of Notylia punctata. I am however now satisfied from the examination of specimens from Loddiges, that the supposed varieties constitute at least 5 well marked species etc. The true Notylia punctata has whiter flowers, than any of the others, with a short flexuose raceme and obtuse sepals, petals and labellum, at the base of the latter of which is an elevated callus.

5. NOTYLIA MICRANTHA Lindl. Bot. Reg. XXIV. Misc. 170. 1838. Rchb. fil. l. c. 47:

„Labello subsessili plano ovato acuto basi calloso, sepalis petalisque linearibus acutiusculis, columna recta."

„Flores dimidium aequant specierum parviflorarum, pallide virides labello flavido. Tepala immaculata." „Demerara Loddiges." — Sepala liberrima? Gynostemium vere glaberrimum?

6. NOTYLIA BARKERI Lindl. Bot. Reg. XXIV. 1838. Misc. 168. Rchb. fil. l. c. 47:

„Labello unguiculato cordato ovato basi calloso margine subreflexo; sepalis lateralibus apice reflexis petalisque lineari lanceolatis acutis, columna recurva."

Similis Notyliae incurvae, sed flores minores, magis flavi, labellum non acutum, distincte callosum. Mexico. Barker 1837. (Specimen: Mexico Xalapa Leibold huc si recte refero: h. sp. s.)

7. NOTYLIA BIPARTITA Rchb. fil. Mss. 1842. l. c. 47:

Racemo pendulo multifloro, bracteis lineari setaceis ovariis pedicellatis triplo brevioribus, sepalis tepalisque lineari lanceolatis apice acuminatis, apicibus sepalorum inferiorum basin prope usque infimam liberorum revolutis, labelli ungue laminae anguste trullaeformis basi rotundatae tertiam vix aequante, carina per unguem basinque laminae gynostemio imo tantum apice incurvo laevi labelli dimidium subaequante.

b b. Labellum basi ecallosum ecarinatumque.

— Hac in sectione ill. auctor de gynostemio velutino („pubescente") seu laevi sermonem non facit, quare dubia jam in priori sectione magna hic prope intolerabilia exorta. —

1) Sepala lateralia omnino coalita.

8. NOTYLIA HUEGELII Fenzl Denkschr. d. k. k. östr. Akad. Math. Natw. Classe I. 255. Cf. Walp. Ann. III. 553.

Huc: *Notylia Tridachne* Lindl. l. c.:

Sepalis lateralibus omnino connatis, labello trullaeformi acuminato basi angustato ecalloso.

Hort. Soc. Garden. Remarkable for the combination of sepals into two, instead of three. Petals are yellow, with one or two orange spots; lip clear yellow. It is probable that Notylia Huegelii is the same.

2) Sepala lateralia bifida.

9. NOTYLIA SAGITTIFERA Hook. B. J. Ill. 315. Lk. Kl. O. Abb. 18. 1840. R. f. l. c.:

Racemo laxo, sepali inferioris apicibus revolutis, tepalis cuneato oblongis, labelli ungue laminam subaequante (4:5), lamina basi cuneato rotundata antice utrinque retusa in apicem setaceum extensa, marginibus revoluta.

(Gynostemio velutino, apice tantum inflexo, nunc plus, nunc minus.) *Pleurothallis sagittifera* Hb. B. Kth.! Voy. I. t. 91. *Notylia multiflora* Lindl. Bot. Reg. 930. *Notylia tenuis* Lindl. Bot. Reg. XXIV. 1838. 169. Folia oblongo lanceolata acuta basi cuneata. Inflorescentia in icone Humboldtiana forsan nimis densa. Nec icon citata Schmidtiana accurata videtur. Demerara fid. Lindl. Caracas Wagener! Regn. Novo Granat. Humboldt Bpl.! (Hab. sp. sicc.)

Huc: *Notylia tenuis* Lindl. Bot. Reg. (1838). XXIV. Misc. 169:

Labello unguiculato e cordato-ovato setaceo-acuminato basi ecalloso margine reflexo, sepalo supremo falcato inflexo, lateralibus apice revolutis petalisque linearibus acuminatis, columna recta.

This species is readily known by its very narrow acuminate sepals and petals, erect column and acuminate lip, which is not carinate at the point. Its flowers are smaller, than those of N. incurva. Nat. of Demerara. Mr. Loddiges.

10. NOTYLIA AROMATICA Barker Bot. Reg. XXVII. (1841.) Misc. 77. Rchb. fil. l. c.:

„Labello unguiculato ovato rhomboideo acuminato basi utrinque deflexo ecalloso, sepalis apice revolutis, inferiore bilobo, petalis linearibus rectis acutis."

„Parva inconspicua. Flores odoratissimi, aquoso virides. Maculae flavae geminae in basi utriusque tepali." Valde affinis N. Barkeri, a qua distat labelli forma et callo. Para. Huc retulerim specimina: Paramaribo 1844. Kappler! Surinam Weigelt! (forsan ibidem lecta) (gynostemio omnino laevi). (Hab. sp. sicc.)

Obs. Num huc *Notylia laxiflora* Westcott Phytol. I. 54? Cf. Lindl. Paxt. III. 46.

11? (10?). NOTYLIA FRAGRANS Wullschl. in v. Schl. Bot. Z. 1852. 842:

Foliis conduplicato vaginantibus distichis, oblongis, acutis, racemo axillari densifloro pendulo, foliis longiore, sepalis acutis, supremo concavo, arcuato, lateralibus a medio liberis revolutis, petalis linearibus incurvis, labello hastato acuminato unguiculato. Radices filiformes, albidae. Pseudobulbillus monophyllus, folii plicati oblongi, acuti basin efformans, compressus striatus, foliorum lateralium basi inclusus, vix 2 centim. longus. Folia lateralia basi conduplicata vaginantia, disticha, subundulata, 1—2,5 decim. longa. Scapus racemosus, axillaris, pendulus, densiflorus, bracteatus, foliis longior, teres, aliquando basi di—trichotomus. Bracteae caulinae adpressae amplexicaules; florales minutae, subulatae, patentissimae, persistentes. Perianthium patulum. Sepala lanceolata, concava, viridi-lutea; lateralia connata, a medio libera et revoluta, labello supposita; supremum arcuatum, acutissimum, apice recurvum. Petala linearia, acutissima, plana, incurva, albida, duabus maculis vitellinis picta. La-

bellum hastatum, explanatum, acuminatum, unguiculatum, ungue verticaliter compresso valido, ad insertionem tumidum, apice prono, nitidum, album. Columna cum ovario continua, crassa, teres, erecta, labello brevior, viridis; clinandrio postice marginato, falcato. Anthera dorsalis, unilocularis, lineari-oblonga, incurva, cum stigmate verticali parallela, viridis. Pollinia duo libera, ovata, compressa, in caudiculae elongatae apice cuneato-dilatato erecta. Glandula minuta, orbiculato-peltata. Ovarium sulcatum. Capsula oblongo-ovata, brevi-rostrata, obsolete trigona. Herba epiphyta non rara in ramis Crescentiae Cujete et passim. Floret per totum fere annum. Flores reflexi, breve pedunculati, odorem Caryophylli aromatici spirantes.

12. NOTYLIA INCURVA Lindl. Bot. Reg. XXIV. 1838. Misc. 167. Rchb. fil. l. c.:

„Labello unguiculato cordato ovato acuminato sub apice carinato basi ecalloso margine reflexo, sepalis lateralibus apice rectis petalisque lanceolatis acutis, columna recurva."

Flores maximi dicuntur, pallide straminei; maculis 2—3 luteis in basi tepalorum. Sepali inferioris laciniae lanceolatae acutae, nec acuminatae. Gynostemium abrupte incurvum. Insula Trinitatis. Loddiges importavit.

13. NOTYLIA MULTIFLORA Hook. Lond. Journ. III. 1844. 315. tab. 10. Rchb fil. l. c.:

Racemo densissimo cylindraceo, labello plano deltoideo trulliformi calloso ungue lamina apice attenuata multo breviore, sepali inferioris apicibus reflexis, gynostemio recto labello breviore.

Mexico? — Haec ad iconem. Analyses valde inaccuratae. Relatio longitudinis gynostemii labellique in quavis figurarum 1. 2. 3. diversissima. Tamen haec longitudinis relativae momenta in hoc genere constantissima, maximi facienda. — Folia oblonga acuta.

Huc: *Notylia multiflora* Hook. (nec Lindl.) l. c.:

Racemo pendulo multifloro, labello trulliformi ecalloso, sepalis petalisque acutis (Tab. X). Hab. Mexico?

Plantae epiphytae, caespitosae. Caulis subnullus, squamis laxis membranaceis tectus. Folium solitarium, oblongum, subcoriaceum, acutiusculum, venis obsoletis. Pedunculus radicalis, simplex, racemus pendulus. Racemus 4—5 uncias longus multiflorus. Flores parvi, albi, sparsim flavo-maculati, basi minute bracteati. Sepala lato-lanceolata, patentia, acuta. 2 lateralia fere ad medium connata. Petala sepalis conformia, patentia. Labellum trulliforme, seu deltoideo acuminatum, planum, ecallosum, basi breviter unguiculatum. Columna teres. Anthera ovata, obtuse subacuminata, dorsalis, unilocularis. Pollinia 2, ovata, seu potius obovata, caudicula elongata, glandula minuta.

It was quite by inadvertence, that the specific name of multiflora was given to this plant by me and written upon the plate, for there is a Notylia multiflora of Dr. Lindley in Bot. Reg. sub tab. 930, and kept up in the G. et Sp. O. As however that plant is avowedly the Pleurothallis sagittifera of Humboldt, and as our species bears more numerous flowers, the prior name of sagittifera had batter, perhaps, be restored to Dr. Lindley's N. multiflora.

14. NOTYLIA ALBIDA Klotzsch! in Otto u. Dietrich Allg. Gtzg. 1851. p. 281. R. fil. l. c.:

Sepalo superiori ovato acutiusculo, inferiori subaequali bidentato, labello brevissime unguiculato oblongo acuto medio utrinque angulato antrorsum attenuato, basi utrinque ante unguem rotundato; gynostemio apice ascendenti recurvo glabro, labelli dimidium aequante.

Ex America centrali (Vid. s. s.)

Huc: *Notylia albida* Klotzsch l. c.:

Pseudobulbis caespitosis, minimis, compressis, leviter 10 costatis, unifoliatis, vagina squamaeformi, acuta, conduplicata, subarida involucratis, foliis terminalibus car-

noso coriaceis; oblongis laete viridibus, dorso carinatis, inferne attenuato-conduplicatis, versus apicem planiusculis, apice rotundatis, inaequaliter apiculatis; scapo pendulo, multifloro, floribus albidis, nutantibus; bracteis lanceolatis, acutis, pedicello appressis suffultis, perigonii foliolis exterioribus latioribus, subflavido albicantibus apice recurvis, late connatis apice bidentatis; interioribus angustioribus, niveis, arcuato conniventibus, infra medium unipunctatis; labello unguiculato, subcarnoso, candido, trullaeformi, integerrimo, nudo, ungue brevi, supra convexo, subtus excavato, columna albida, recurva.

15. NOTYLIA PENTACHNE Rchb. fil. in Seemann Bonpl. II. 90. et Van Houtte Flore des Serres IX. p. 102. Rchb. fil. l. c.:

Racemo laxo, sepalis oblongo lanceolatis, sepali inferiori apicibus revolutis, gynostemio pubescente apice paulo ascendente labelli dimidium superante.

Veraguas. (Cf. infra). (v. v. c. et hab. sp. sicc.)

Huc: *Notylia Pentachne* Rchb. fil. in Xeniis I. Tab. 20. II. 8—16. pg. 50:

Pseudobulbi oblongo ligulati ancipites vaginis scariosis acutis vestiti. Folia oblongo ligulata acuta basi bene cuneata. Pedunculus elongatus subpedalis basi subnudus bi-trivaginatus parte superiori racemosus, multiflorus. Bracteae lineari setaceae ovarii pedicellati tertiam subaequantes. Flores carnosuli illos Notyliae punctatae Lindl. (Bot. Reg. 759.) dimidio excedentes. Sepalum summum oblongum obtuse acutum fornicatum. Sepala lateralia in unum oblongo ventricosum extus (sc. infra) sulcato didymum connatum apicibus setaceis brevissimis fragillimis extrorsis seu recurvis. Tepala lanceolata subcuneata, apice conniventia. Labelli unguis a lateribus compressus subaequilongus laminae hastatotrullaeformi, carnosae, basi ad utrumque latus unguis impressae, linea media sulcatae, apice acutae, carinaeformi ancipiti. Gynostemium apice incurvatum, velutinum, pulvinari pro caudicula recipienda maximo. Flores sature virides. Tepala candida basi guttis 2—4 aurantiacis prominulis. Labellum album. Anthera et pollinarium genetica.

16. NOTYLIA CARDIOGLOSSA Rchb. fil. l. c.:

Racemo densiusculo, bracteis lineari subulatis ovaria pedicellata dimidio aequantibus, sepalis tepalisque lanceis, sepalo inferiori bifido laciniis revolutis, labelli ungue lamina duplo breviore, lamina cordato triangula (nec hastata!) apice bene attenuata, gynostemio sigmoideo glabro labello duplo breviore.

Guyana gallica. (Hab. sp. sicc.)

3) Sepala lateralia libera.

17. NOTYLIA TRISEPALA Lindl. in Paxt. Fl. G. III. p. 45. 1852:

Racemo gracili, tenui, ascendente, bracteis ovario brevioribus, sepalis clausis disjunctis, labello subhastato ecalloso.

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18. NOTYLIA ORBICULARIS A. Rich. Gal. Ann. Sc. Nat. 1845. p. 26. No. 80:

„Pseudobulbis ovoideo-triangulis, monophyllis; folio suborbiculari crasso coriaceo, obtuso; scapo nutante foliis duplo longiori: floribus viridibus. Mexico."

Clavis ex Rchb. fil. l. c.:

A. Folia equitantia ensata.

aa. Labello libero ecalloso gynostemio longiore. *Notylia bicolor* Lindl. 1

bb. Labello basi adnato calloso gynostemio breviore. . . . . *N. Wullschlaegeliana* Focke 2.

B. Folia plana.

aa. Labello basi carinato callosove.

1) Gynostemio velutino (labello etiam velutino) . . . *N. pubescens* Lindl. 3.
2) Gynostemio laevi.
α. Labello trullaeformi.
αα. Sepalo inferiori bifido.
Sepalis tepalisque obtuse acutis, pedunculo flexuoso, flore candido . . . . *N. punctata* Lindl. 4.
Sepalis tepalisque acutis, pedunculo . . . , flore aurantiaco *N. Barkeri* Lindl. 6.
ββ. Sepalo inferiori profunde bipartito. *N. bipartita* Rchb. fil. 7.
β. Labello subsessili plano, flore minutissimo . . . . *N. micrantha* Lindl. 5.
bb. Labello basi ecarinato ecallosove
1) Sepalis lateralibus omnino coalitis . . . *N. Huegelii* Fenzl. 8.
2) Sepalo inferiori bifido. . . . .
α. Labello margine reflexo.
αα. Labello sub apice laevi; sepali inferioris laciniis revolutis
tepalis acutis . . . . *N. aromatica* Barker. 10.
tepalis acuminatis . . . . . . *N. sagittifera* Hook. 9.
ββ. Labello sub apice carinato, sepali inferioris laciniis rectis. . . . . *N. incurva* Lindl. 12.
β. Labello margine plano.
αα. Labelli ungue laminae dimidium aequante.
labello basi utrinque depresso, rotundato hastato; gynostemio velutino. . . . . *N. Pentachne* Rchb. fil. 15.
labello basi vere sinuato cordato, gynostemio glabro . . . . . . *N. cardioglossa* Rchb. fil. 16.
ββ. Labelli ungue laminae dimidio multo breviori
Sepalo summo lanceo. . . . . . *N. multiflora* Hook. 13.
Sepalo summo ovato. . . . . . *N. albida* Klotzsch. 14.
3) Sepalis inferioribus liberis. . . . . . *N. trisepala* Lindl. 17.

1447 b. **COHNIA** *Rchb. fil.*

in v. Schl. Bot. Ztg. 1852. 928.

Perigonium connivens, membranaceum; phylla externa oblonga erecta, lateralia interna subaequalia, obtuse apiculata, labellum plano unguiculatum, dein in laminam orbicularem, postice utrinque obtusangulam, antice obtusam (igitur alte reniformem), cochlearem dilatatum; calli duo teretiusculi acuti antrorsi in basi unguis, antepo-sita carina rhombea; gynostemium breve, crassum, sub angulo obtuso in labellum pronum, antice utrinque brachiatum, brachia oblonga, obtusa, laminata, pauliaper antice curvulo-ascendentia; androclinium postice unidentatum, ascendens, rostellum obtusum, per longitudinem unisulcatum, apice bilobulo, hinc quasi didymum. Anthera oblonga, obtusa, bilocularis. Pollinia depresso-pyriformia, postice biloba. Candicula linearis; glandula parvula, quadrata (?).

1. COHNIA QUEKETTIOIDES Rchb. fil.

Eine seltsame Pflanze. Ein fusslanges stielrundes Blatt und ein gekrümmter, absteigender, stielrundlicher, dünner Blüthenstiel von 5—6 Zoll Länge sind von einer äusserst weiten, spitzen dürrhäutigen Scheide an ihrem Ursprunge verhüllt. Noch

zwei kürzere Scheiden stehen tiefer, die unterste von zahlreichen Luftwurzeln durchbohrt. Der Blüthenstiel hat drei von einander entfernte, sehr spitze, kurze Scheiden. An der Spitze einige kleine Blüthen; wenig grösser, als bei Phymatidium. Deckblätter dreieckig spitz, kürzer als Fruchtknoten. — Ehe die sehr genaue Beschreibung (L. F. Fasc. 1.) der Quekettia erschien, vermuthete ich, es möchte meine Pflanze dahin gehören. Ich finde grosse Anklänge an die von mir aufgestellten Gattungen Sigmatostalix und Neodryas — Quekettia wird wohl auch sehr verwandt sein. Es bilden diese vier eine eigenthümliche Gruppe — Cohniaceae — von den ächten Rodriguezia-ceae durch den Säulenwinkel, von Papperitzia durch den Lippengrund verschieden. Zu Jonopsis bieten mindestens die mir bekannten 3 Gattungen keine besondere Verwandtschaft.

1447 c. PAPPERITZIA *Rchb. fil.*

in v. Schl. Bot. Ztg. 1852. 670.

Perigonii phylla ovalia, concava, apice linearia, subaequalia, lateralia externa in unum aequale connata, magis tamen saccato-excavata. Labellum basi cum marginibus gynostemii subcontinuum, ligulatum, canaliculatum, margines canalis ascendentes, ad laminam erectam, postice concavam, apice tridentatam; gibber antice in basi laminae in ligulam acutam, complicatam, inferne carinatam productae., Gynostemium humile, carnosum, antrorsum, utrinque alato-membranaceum, alae in brachia ligulata subito ascendentia subito superne producta; androclinium ascendens, postice grosse unidentatum, dein marginatum ad medium latus gynostemii, auriculatum; fundus androclinii convexus, antrorsum in laminam triangulam, apice bidentatam productus. Anthera semipyriformis, semibilocularis. Pollinia 2, exacte globosa. Caudicula basi rotundata, convexa, antrorsum in ligulam linearem producta. Glandula ovata, minuta. Stigma minutum, sub processu rostellari. — Epiphyta mexicana, ebulbis foliis distichis carnosis, racemo paucifloro, terminali (?). Affinis est Rodriguezíae, distat caudicula, gynostemio humili, polliniis, labelli fabrica. — Dicavi novum et insigne genus infausto amico b. William Papperitz.

1. PAPPERITZIA LEIBOLDI (*Leochilus Leiboldi* Rchb. fil. Linnaeâ XVIII. p. 401.):
Ich quälte mich damals, diese Pflanze unterzubringen, weil ich mich scheute, eine neue Gattung aufzustellen. Ich habe aber schon damals ausdrücklich bemerkt, wie die Art von Leochilus bedeutend abweiche (vgl. daselbst). — Die hellpurpurfarbigen Blüthen ziemlich fleischig; so gross etwa, wie die der Rodriguezia secunda. Herr Leibold versicherte, lebende Exemplare nach England gebracht zu haben, daher ich sie mit aufführe. Jedenfalls stammte sie von Zacuapan in Mexico, wo allein der Reisende gesammelt zu haben scheint.

1447 d. NEODRYAS *Rchb. fil.*

in v. Schl. Bot. Ztg. 1852. 834.

Perigonium connivens (semper ?), membranaceum, phylla externa oblonga acuta excavata, nervis extus valde prominulis, lateralia interna latiora, ovalia, acuta; labellum unguiculatum in laminam oblongam, transversam, excavatulam margine repandulam productum; callus elevatus, carnosulus sulcis apice retuso obtuse quadrilobulus, carinis 5 antepositis abbreviatis, duabus appositis in laminae basi ante unguem. Gynostemium in labellum medio ascendenti angulatum prominens, semiteres, antice (sc. inferne) canaliculatum, anguli antici auriti, aures oblongo-falcatae, ascendentes, bilobulatae, antrorsae, ima basi inferiore in lobulos stigma versus erectos (Rodriguezia more) triangulos, parvulos productae. Androclinium vix marginatum, semirotundum, rostellum retusum, medio semicirculari introrsum excisum. Anthera pyriformis, dorso longitudinaliter unisulcata, hinc postice didyma, dissepimenta obliterata.

Pollinia gemina pyriformia, longitudinaliter angulata, solida in caudicula ligulata, glandula antice excisa transversa reniformis.

1. NEODRYAS RHODONEURA Rchb. l. c.:

Trugknollen länglich, schmal, nach oben verschmälert, zweischneidig. Das aufsitzende Blatt lederartig, länglich lineal, unten verschmälert, oben spitz. Spitze umgebogen, auf der Unterseite gekielt. Wie es scheint stets nur ein derartiges Blatt unterhalb des trugknolligen Internodiums, die nächst-unteren Blätter sind längliche, spitze, gekielte, häutige Scheiden. Aus der Achsel jenes unterständigen Blattes entspringt der stielrunde, spannenhohe Blüthenstiel, woran drei sehr von einander entfernte, enge, oben spitze Scheiden. Oben ist der Blüthenstiel verzweigt. Jeder Zweig von deckblattiger, lanzettlicher, spitzer, kurzer Scheide gestützt, oberwärts zickzackig, an jeder Winkelspitze ein kurzes dreieckiges, spitzes, dunkles Deckblatt, welches kürzer als der Fruchtknoten. Blüthen so gross, wie bei Polystachya luteola. Hüllblätter purpurn mit tiefer gefärbten Nerven; Lippe weiss (?), Säule (?) und Buckel der Lippe (!) gelb. — Höchst eigenthümlich durch die zickzackigen Blüthenstielzweige (nach Art mancher Pleurothallis, aber dicker) und die zweizeiligen Deckblätter, die, ständen sie dichter, mich an Bromheadia erinnern würden. — Im System steht die Gattung nächst Rodriguezia und Sigmatostalix; das rostellum zeichnet sie vor Allem aus. — Ich untersuchte die einzige vorliegende Blüthe, welche jedoch so vortrefflich getrocknet war, dass ich meine Resultate unbedenklich veröffentliche. Bolivia. Bridges.

Rchb. fil. Xenia p. 88. Tab. XVI. 12—25.

1448/1. CHAENANTHE *Lindl.*

Bot. Reg. (1838). XXIV. Misc. 60.

Perianthium ringens. Sepalum superius erectum; lateralia connata, basi productae columnae adnata, saccata, porrecta. Petala basi valde obliqua, et columnae productae adnata, revoluta, sepalis majora et magis membranacea. Labellum cum columna connatum, basi in calcar cum basi columnae productum, trilobum. Anthera antice truncata. Pollinia 2, pyriformia, in caudiculam linearem deflexa.

1. CHAENANTHE BARKERI Rchb. fil. l. c.:

Imp. by Geo. Barker Esq. of Birmingham from Para; who sent me specimens April last. Striking obliquity of flower. Lateral sepals are lengthened into a bag, which hangs down in front of the ovary; then the petals are stretched out at their base to adapt themselves to this; further, the labellum is connate with the column for nearly all its length, the latter being lengthened so as to fill up the bag of the sepals; and finally the anther is abruptly truncated in front, and the 2 pollenmasses are bent down upon the caudicula so as to lie almost parallel with it. Nearest all to Notylia in nat. affinity.

1451. TRICHOPILIA *Lind.*

„Nat. Syst. Bot. Ed. 2. 446." Bot. Reg. XXII. 1863. — Pilumna Lindl. B. R. XXX. Misc. 74.

Lindl. Bot. Reg. l. c.: Sepala et petala aequalia patentia, angusta. Labellum magnum, petaloideum, convolutum, cum columna parallelum, trilobum, lobo intermedio subbilobo planiusculo; intus nudum. Columna teres, clavata. Clinandrium cucullatum, trilobum, villoso fimbriatum. Anthera unilocularis, compressa, antice convexa. Pollinia 2, postice sulcata, caudiculae tenui cuneatae adhaerentia; glandula minima. — Pseudobulbi carnosi, vaginis maculatis supertecti, monophylli, coriacei. Flores solitarii axillares.

a. Folia carnosa, demum subteretia.

1. TRICHOPILIA HYMENANTHA Rchb. fil. Bonpl. II. 90. et Xenia I. p. 15. Tab. VII. 1—11:

Folio tereti mucronato sulcato, racemo plurifloro (4—7), labello orbiculato subtrilobo denticulato, androclinio utroque angulo basilari unibrachiolato.

Folium teretiusculum, utrinque attenuatum, apice mucronatum, superne sulcatum fere Brassavolae cordatae Lndl., 8—9 pollices longum in internodio teretiusculo caulis. Pedunculus (forsan ex vagina stipante caulis axillaris?) gracilis, 4—6 pollicaris, apice racemosus. Bracteae membranaceae oblongae acutae seu lanceolatae acutae apice dilatatae subcucullatae ovaria pedicellata inferiora aequantes. Sepala ac tepala subaequalia lineari lanceolata undulata seu torta candida. Labellum orbiculatum seu ellipticum, sinu obsoleto in utroque margine trilobulum, apice acutiusculum seu emarginatum, margine anteriori et lateribus minute serrulatum denticulatum; laeve; basi cochleatum callo ascendente foveato vertice retuso utrinque antice unicruri, utroque latere foveato (exacte uti in Trichopilia tortili), ima basi gynostemii faciei infimae adnatum; candidum, punctulis purpureis in basi. Gynostemium subsemiteres; androclinium horizontale seu descendens; rostellum triangulo bidentatum ascendens; limbus valde membranaceus, cucullatus, antrorsus, margine denticulatus, basi utrinque super angulum gynostemii linearis apice fimbriolatus; foveae triangulae seu oblongae limbus tumidus haud ita productus. Anthera oblonga, per dorsum jugo carinatum. Pollinia linearia, utrinque obtusata, postice sulcata; caudicula linearis, glandula minuta.

Rchb. fil. in Bonpl. II. 280: Ocanna 8000'. Juli 1849. Schlim. N. 29:

Huc: *Leucohyle* Kl. Mss. in App. Sem. Berol. 1854:

Perigonii foliola subaequalia libera acuminata incurva, exteriora et interiora conformia. Labellum liberum integrum sessile columnae parallelum, circa columnam excavatum. Columna erecta arcuata deorsum attenuata subteres ovario continua. Androclinium dorso appendiculo membranaceo cucullato, antice dentato-fimbriato instructum. Anthera bilocularis. Pollinaria 2, pyriformia, candida, postice sulcata: caudicula filiformi, glandula reclinata parva. Herba peruana epiphyta caespitosa, pseudobulbis parvis teretibus monophyllis; foliis carnosis anguste oblongis recurvis dorso rotundatis, supra canaliculatis; racemis erectis basilaribus paucifloris.

Leucohyle Warscewiczii Kl.

Racemis 2—3-floris folio quintuplo brevioribus; floribus albidis; perigonii foliolis elongatis incurvis acuminatis, basi attenuatis; labello elliptico excavato cuspidato, supra pallide purpureo-punctato. Pseudobulbi pollicem longi, pennae anserinae crassitudine. Folia 7 poll. longa, 4 lineas lata. Racemus pollicem longus. Perigonii foliola 8 lin. lata. Labellum 7 lin. longum et 5 lin. latum. — In arboribus Peruviae: de Warscewicz. Floruit M. Novembri. (Vid. typum! Rchb. fil.)

Rchb. fil. Bonpl. III. 215: Foliis junioribus lineariligulatis carnosis canaliculatis, vetustis demum convolutis, hinc quasi teretiusculis.

2. TRICHOPILIA MUTICA Rchb. fil. Wullschl. Mss. Huc: *Macradenia mutica* Lindl. Bot. Reg. (1839.) XXV. Misc. 22:

Foliis coriaceis lineari-lanceolatis dorso convexis, racemo prostrato trifloro bracteis oblongis obtusis-cucullatis pedicellis aequalibus, labello cordato-ovato acuto basi cucullato medio transverso, clinandrio serrato, rostello mutico.

Folia solitaria, lineari lanceolata, coriacea, avenia, dorso convexa, caulibus brevibus compressis teretibus insidentia. Racemus radicalis triflorus, debilis, bracteis brevibus, cucullatis, striatis, sphacelatis. Flores sordide albi, rubro brevissime tincti. Sepala et petala aequalia, linearia acuta, explanato-patentia. Labellum cum columna parallelum, nec articulatum, cordato-ovatum, acutum, basi cucullatum; callo elevato canaliculato, transverso. Columna semiteres, labello duplo brevior; clinan-

drio cucullato denticulato. Anthera parva, in fundo cucullì, 2-locularis, cristata. Pollinia 2, caudicula brevi lineari. Rostellum nullo modo elongatum.

Small, with dingy white flowers. Flowered with Mr. Knight, of the Kings Road. Aug. 1835. Trinidad it is said to be nat. of.

b. Folia plana.

3. TRICHOPILIA LAXA Rchb. fil. in Otto Hamb. Gartenztg. 1858. 229. Huc: *Pilumna* Lindl. Bot. Reg. XXX. 1844. Misc. 74:

Ovarium tricostatum. Sepala et petala aequalia patula oblique inserta. Labellum basi columnae adnatum, subintegrum, unguiculatum, convolutum, inappendiculatum. Columna clavata, teres, clinandrio cucullo dentato membranaceo circumdato; buccis duabus carnosis semiclausum. Stigma verticale. Pollinia 2, postice fissa, caudiculae brevi et glandulae ovatae adnata.

Herbae epiphytae pseudobulbis vaginatis, foliis coriaceis, pedunculis radicalibus. Genus Aspasiae proximum, clinandrio cucullato, columna tereti, nec non stigmate verticali nec faciali diversum.

Pilumna laxa Lindl. l. c. et 1846. tab. 57:

Folio lineari-oblongo, racemo laxo, multifloro breviore, bracteis laxis, cucullatis obtusis, sepalis petalisque lineari lanceolatis, labello oblongo indiviso rotundato medio constricto per axin unilamellato.

In the woods of Timbio near Popayan. Hartweg. — Flowers are produced in loose erect racemes, out of broad obtuse short membranous spotted bracts. The stalks and ovaries are an inch and half long; the latter with three very stout and strong ribs. The sepals and petals are a pale watery green, erect linear-lanceolate, equal, faintly tinged with purple. The lip is cream-colour, rolled round the column at the base, to which it also is united at the lower end. The column has a singular fringed hood, overlying the anther, and a nearly vertical stigma, closed in by fleshy inflated cheeks. In these circumstances it differs from Aspasia to which the genus is nearly akin. It flowered with Mr. Barker and is said to have been purchased at Mr. Skinner's sale, and must if there is no mistake in the matter, have come from Guatemala. It is however so exactly like spec. found in Popayan by Mr. Hartweg, that we cannot help suspecting some error.

Rchb. fil. Bonpl. II. 15. Merida 7000'. Die wilde Pflanze hat viel grössere kappige Deckblätter, als die cultivirte. Dazu steht der starke 6—7 blüthige Pedunculus starr ab, während er bei den Culturpflanzen herabhängt. Wagener.

4. TRICHOPILIA FRAGRANS Rchb. fil. in Otto Hamb. Gtz. 1858. p. 229. Huc: *Pilumna fragrans* Lindl. Bot. Reg. XXX. 1844. Misc. 74:

Folio lato oblongo, racemo trifloro breviore, bracteis lanceolatis erectis, obtusis, sepalis petalisque oblongo lanceolatis acuminatis, labello oblongo apiculato subtrilobo laevi.

Near the city of Popayan. Flowers large, white, sweetscented, with an orange coloured spot on the lip, according to Mr. Hartweg. —

Lindl. Orch. Lind. 1846. p. 13: Pseudobulbs compressed, long, oval, obtuse etc. Epiphyte from the dark and damp forests of Merida. 5600'. Flowers white, as snow. Juli 1842. N. 649. *Trichopilia candida* Linden.

Obs. Nondum rite perspicio, num *Pilumna nobilis* Rchb. fil. — conf. Walp. Ann. III. 541. — huc pertineat.

5. TRICHOPILIA WAGENERI Rchb. fil. l. c. Huc: *Pilumna Wageneri* Rchb. fil. Bpl. II. 15:

Pseudobulbis ancipitibus obtusanguloquadratis, foliis —, pedunculo quinquepollicari trifloro, bracteis oblongis apiculatis tertiam ovarii pe-

dicellati aequantibus, sepalis tepalisque paulo latioribus lineari lanceolatis basi angustatis, sepalis lateralibus labello Myanthiorum more suppositis, labello a basi cuneato anguste dilatato in laminam trilobulam antice apiculatam, carina elevata a basi medium usque progrediente, androclinii cucullo lacero fimbriato postice producto.

Sepala und Tepala grün, Lippe weiss mit orangegelbem Grunde. *P. nobilis* R. fil. ist verschieden durch ganz weisse Blüthen von viel häutigerem Gewebe, die Lippe ist nicht allmählig, sondern plötzlich ausgebreitet, so dass man sagen kann: labelli lamina utrinque semicordata; ferner ist der Rand sehr stark gekräuselt, endlich ist die Mittellinie nur erhaben, während hier ein starker Kiel da ist, auch findet sich die Säule des Androclinium viel feiner gewimpert. Schwerer war die Entscheidung, ob die Pflanze nicht die ungenügend beschriebene P. candida wäre. Diese soll haben stumpfe Deckblätter, eine ganz glatte Lippe, schneeweisse Blüthe mit gelbem Fleck. Sie soll gleich sein *Trichopilia? candida* Linden. Herr Linden versendet als Cymbidium candidum Individuen der Pilumna laxa, die Andere auch Aspasia candida nennen. Bei Aufstellung der Gattung wurde sie mit Aspasia verglichen. Das ist sehr leicht, sie muss ferner mit Trichopilia verglichen werden. Die Gestalt der Caudicula ist so ziemlich der einzige irgend haltbare Unterschied dieser Gattungen. Die Blüthen der vorliegenden Art so gross wie die der Trichopilia tortilis. Caracas. 5000'. April. Wagener.

6. TRICHOPILIA MACULATA Rchb. fil. Bonpl. III. 215:

Affinis T. albidae Wendl. fil. pseudobulbis quadratis obtusangulis compressis latitudine duplo longioribus, vaginis obscure maculatis, foliis subtus punctulatis, sepalis semel tantum semitortis, antherae crista praerupta ultra loculos producta nec fasciculato papillifera more T. albidae.

Blüthenhülle gelb. Lippe und Säule weiss. Lippe von keilförmigem Grunde ausgebreitet, vorn beiderseits stumpfeckig; mit vortretendem ausgerandeten Mittellappen. Säule am Grunde mit dreieckiger Fläche der daselbst dickfleischigen Lippe angewachsen. Narbe länglich, unten ohne einspringende Ecke. Androcliniumsaum dreilappig, Lappen fein gezähnelt. Port Chagres, gesammelt von Hrn. Dr. Behr. Blühte in Herrn Kefersteins Sammlung zu Kröllwitz unter Hrn. Lehmann's Cultur.

7. TRICHOPILIA ALBIDA Herrm. Wendl. Berl. Allg. Gtz. 1851. 362:

Pseudobulbis oblongo-lanceolatis, compressis, sulcatis, monophyllis, foliis oblongo lanceolatis, planis, basi subcordatis, apice acuminatis, recurvis; racemis basilaribus pendulis, subtrifloris; perigonii foliolis conformibus, linearilanceolatis, acuminatis, undulatis, rectiusculis, subtortis, pallide luteo viridulis, margine subhyalinis; labello petalis longiore, quadrilobo, lobis rotundatis undulato crispatulis, basi arcte convoluto, albido, fauce punctis luteo-ochraceis confluentibus adspersa; cucullo trilobo, laciniis fimbriatis, media longiore.

Blüthenblätter 1½" lang, 3''' breit; blassgelb-grünlich, am Rand fast durchsichtig. Labellum ist glatt, wenig länger, als Blüthenhülle; Narbe vierlappig. Auf Mitte der Lippe einige unregelmässig erhaltene Längsstreifen; Blüthenfarbe ist weiss, in der Mitte durch gelbe ockerfarbige Punkte. Hat längere Scheinknollen als Trichopilia tortilis, coccinea. — Caracas. Wagener. — Cf. Lindl. Paxt. Fl. G. III. 28. — Rchb. fil. Bonpl. II. 15. Caracas. Aug. 1850. Wagener. — Regel Gartenfl. III. 78.

8. TRICHOPILIA SUAVIS Lindl. Paxt. Fl. G. I. p. 44. (Walp. Ann. III. p. 553.) et p. 53. Tab. 11:

Additis: cuculli trilobi laciniis omnibus fimbriatis intermedia angustiore. — Van Houtte Fl. Serr. VIII. 761. — Hook. B. Mag. 4654. — Lem. Jard. Fl. III. 277.

9. TRICHOPILIA MARGINATA Henfr. Gard. Mag. Bot. Jul. 1851. c. fig. — *Trichopilia coccinea* Wscwz. corresp. gard. Lindl. Paxt. Fl. G. II. 80. tab. 54:

Pseudobulbis angustis compressis, sulcatis, monophyllis, foliis lanceolatis planis basi subcordatis apice acuminatis recurvis, pedunculis unifloris, petalis linearilanceolatis acuminatis semel tortis, labello 4-lobo, lobis rotundatis convexis planis basi erecto convoluto, cuculli trilobi laciniis fimbriatis subaequalibus. Central-Amerika. Wrswcz. — Hook B. M. 4857. — Lem. Jard. Fl. tab. 184. (ex Gard. Mag. mutuata icon).

10. TRICHOPILIA GALEOTTIANA Rich. et Gal. tab. 31. Ann. sc. nat. 1845. p. 26:

Pseudobulbis teretibus cauliformibus, 1-phyllis; scapo 1-floro; flore maximo luteo, sepalis planis.

Mexico.

11. TRICHOPILIA TORTILIS Lindl. Bot. Reg. XXII. (1836.) Tab. 1863:

Pseudobulbi oblongi, sulcati, compressi, vaginis fusco maculatis arcte vestiti, aliquando folii fere longitudine. Folia solitaria, oblonga, coriacea, acuta, plana vel leviter complicata. Flores solitarii, axillares; horizontales, sessiles. Sepala et petala aequalia, linearilanceolata, patentissima, spiraliter torta, margine crispatula, fusco lutea, disco brunnea. Labellum 2 pollices longum, circa columnam convolutum, album, maculis pluribus magnis inaequalibus ad interius, limbo trilobo, intermedio subbilobo. Columna cum ovario continua, teres, clavata, alba; clinandrio cucullato, trilobo, lobis descendentibus, falcatis, ciliato laceris. Anthera compressa, apiculata. Pollinia 2, parva, pyriformia, postice sulcata, caudicula cuneata inserta, glandula minima ovali. Gynizus excavatus, paululum oblique retrorsum versus. — Mexico imp. Barker. — Floral Cab. III. 101. — Bot. Mag. 3739.

Obs. Icon B. Reg. mihi haud grata. Flores terminales depicti!! Rchb. fil.

1451/₁. DIGNATHE *Lindl.*

Hort. Soc. Journ. II. 268.

1. DIGNATHE PYGMAEA Lindl. in Hort. Soc. II. 268:

Pseudobulbus squamatus monophyllus. Flos solitarius resupinatus carnosus. Sepala et petala patentia aequalia. Labellum planum recurvum basi subsaccatum et per lamellas 2 carnosas columnae adnatum. Columna nana, acuta, semiconica, clinandrio dorsali immarginato. Anthera —? Pollinia 2, caudicula lineari, glandula parva ovali.

Genus Pilumnae et Aspasiae affine. Columna nana, clinandrio dorsali immarginato et habitu quodam valde diversum.

Mexico. Messrs. Loddiges. Inconspicuous. Whole plant is barely 2 inches high, and forms little tufts like an Alemania or Dinema. Pseudobulbs oblong, buried in leathery acute scales. The leaves are solitary, oval, stalked, 3-toothed at the point. Peduncle is solitary from the base of the pseudobulb, oneflowered, as long as the short keeled petiole. A keeled acuminated membranous bract is larger, than the ovary; the tiny flower is green, fleshy with a few yellowish spots upon its disk and the 2 succulent plates that unite it to the column. Both plates and column are downy.

1451/₁. HELCIA *Lindl.*

Bot. Reg. XXXI. (1845.). Misc. 26.

Sepala et petala coriacea conformia, patula. Labellum patulum membranaceum, planum, medio constrictum, basi utrinque appendice carnosa truncata medio foveata in lineas 2 breves elevatas procurrente auctum, ipsa basi excavatum pilosum. Columna libera, teres, clinandrio

erecto undique fimbriato. Anthera carnosa, in pileum solidum obtusum producta, bilocularis. Pollinia 2, postice excavata, caudicula cuneata, glandula parva ovali. Herbae pseudobulbosae, foliis solitariis, coriaceis, undulatis, pedunculo radicali.

The relationship of this plant is evidently greatest of Trichopilia. It is however also an associate of Aspasia, from which it differs in not having the lip united to the column, and in its deep fringed antherbed.

1. BELCIA SANGUINOLENTA Lindl. Bot. Reg. XXXI. (1845.) Misc. 26:

Pseudobulbi ovati, elongati, subteretes. Folia 4—6 pollicaria, undulata, basi in petiolum canaliculata angustata. Pedunculus pseudobulbis brevior, uniflorus, bibracteatus. Sepala et petala olivacea, fusco sanguineo maculata. Labellum album striis sanguinolentis, obovatum, emarginatum, appendicibus luteis denticulatis striatis.

At Paccha in the Andes of Guayaquil. Hartweg.

Lindl. Paxt. Fl. G. II. p. 97. Nr. 362. Xyl. 182: Greenish flower banded with brown, white lip with broken crimson veins. Paccha, Andes of Guayaquil. Approaches Trichopilia. Instead of its column being rolled up in the labellum, it stands erect and clear of it; instead of the antherbed having two lacerated processes, it is surrounded by a deep fringed border; finally instead of the lip being perfectly smooth, continuous and destitute of all appendages at the base, it is contracted about the middle, below the contraction furnished with a pair of thick fleshy lobes hollowed out in the middle standing erect on each side of the column, without however touching it; and the space between these lobes forming the very base of the lip in a hollow hairy pit.

1452. IONOPSIS *H. B. Kth.*

Humb. Bonpl. Kunth, Nov. Gen. et Sp., I. 348. LO., p. 193. — Iantha Hooker, Exot. Fl., t. 113. — Lindl. Folia. I. Oct. 1. 1852:

Sepala erecta, aequalia, membranacea; lateralibus in saccum connatis. Petala sepalis conformia. Labellum membranaceum, sepalis longius, columna parallelum, limbo reflexo; basi angustatum, auriculis 2 membranaceis intra marginem callisque 2 carnosis intra auriculas. Columna erecta, nana, aptera, semiteres, rostello rostrato. Pollinia 2, cereacea, sphaerica, postice excavata; caudicula lineari; glandula obovata. Anthera unilocularis rostrata. Herbae epiphytae, Americae tropicae, acaules. Folia coriacea. Flores in racemis aut paniculis terminalibus dispositi, albi aut violacei.

Short erect sepals of which the lateral form a small bag, a long lip reflexed at the upper half, and furnished at the base with four processes of which two are thin membranous auricles within the edge of the lip, and two much more fleshy calli within the auricles themselves, distinctly limit this little genus, the species of which are however very difficult to distinguish in herbaria. The two auricles above mentioned have been hitherto mistaken both by myself and others for the edge itself of the lip, owing to their extreme thinness and the consequent difficulty of observing them in dried flowers. The generic character in LO., p. 193, moreover, wrongly, states, that the lateral sepals are united to a lip, which is saccate at the base. Such appears at first sight to be the case; but in reality the base of the lip adheres only to the base of the column, and the sac is formed entirely by the union of the base of the sepals.

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1. IONOPSIS SATYRIOIDES Rchb. fil. Mss. Huc: *Ionopsis teshculata* L. O. 193. Fol. 1:

I. foliis tereti-subulatis, sepalis acutis basi connatis, petalis longioribus obtusis apice patentibus, labello ovato-acuminato, sacco didymo-ventricoso.

Epidendrum Satyrioides Swartz, Prodr. 123.
Dendrobium testiculatum Swartz, Fl. Ind. Occ., p. 1533.

Leaves two or three inches long. Scape filiform, three or four times as long as the leaves, simple or occasionally divided, few-flowered, with some minute sheathing scales. Flowers from three to six, small, appearing in the spring, white, with the fragrance of violets. Lip and petals veined with crimson.

Wild in the West-Indies, occasionally; on the mountains of St. Domingo and Jamaica, on the Crescentia—Swartz.

2. IONOPSIS TERES Lindl. B. Reg. 1838. M. 181. l. c. F. sub 2:

I. foliis teretibus, scapo simplici filiformi paucifloro, sepalis acutis lateralibus semiconnatis, labello obovato-lanceolato apice undulato quasi trilobo, callis magnis conspicuis.

Flowers small, white. Petals obtuse, and lip with crimson veins. The threelobed lip appears to separate this from the last; whether the sac is didymous or not I have not been able to ascertain.

Wild in Demerara—Schomburgk.

Lindl. l. c.: „imp. Loddiges." — „Labello obovato lanceolato apice undulato quasi trilobo, medio bilamellato."

3. IONOPSIS PALLIDIFLORA Lindl. B. Reg. sub 1904. l. c. F. sub 3:

I. foliis angustis oblongis basi carinatis, scapo simplici, sepalis petalisque obtusis, labello bilobo plus duplo longiore, sacco didymo ventricoso.

Iantha pallidiflora Hooker, Exot. Fl. t. 113.

Flowers white, with purple stripes. Leaves, according to Hooker, binate, flat, emarginate; according to a drawing in my possession, oblong, acute, distichous. The plain leaves and didymous sac are peculiar to this species.

Wild in Trinidad—De Schack, Lockhart.

4. IONOPSIS BREVIFOLIA A. Rich. Gal. Ann. sc. N. S. III. 26. Lindl. l. c. sub 4:

I. „foliis binis recurvis oblongis apice acutissimis, scapo 3-4-floro, floribus violaceis, sepalis basi saccatis, labello triplo longiore obcordato profunde bilobo."

Known only from the above short character. The expression „sepalis basi saccatis" seems to point to a testiculate form like that of I. pallidiflora.

Wild in Mexico—Galeotti.

5. IONOPSIS UTRICULARIOIDES Lindl. Coll. Bot. 39. A. Lindl. l. c. sub 5:

I. foliis oblongis acutis carinatis, racemo brevi subpaniculato, sepalis acutis, petalis obtusis, labelli subbarbati limbo cuneato bilobo sepalis breviore, sacco simplici.

Epidendrum utricularioides Swartz, Prodr., 122.
Dendrobium utricularioides Swartz, Fl. Ind. Occ., 1531.

If the plant figured in the „Collectanea Botanica" be taken to be that, which Swartz meant by D. utricularioides, then the very short limb of the lip will be its principal mark of distinction from the succeding species, as far as I am at present able to determine, no specimen of it having been preserved in my herbarium. The flowers are very small, white, with red veins to the petals and a few red spots to the lip. The localities given in L. O. probably refer to other species. I have seen no Jamaica specimens.

Wild in Jamaica, in the driest plains, on the branches of Logwood and Citron trees—Swartz; Trinidad—Woodford.

Huc: *Ionopsis tenera* Lindl. in B. Reg. t. 1904. Paxton's Flower Garden; gleanings, N. 276, ic. 141. Fol. l. c. sub 6:

I. foliis rigidis acutis sulcatis basi carinatis, scapo racemoso vel pa-

niculato coarctato, sepalis petalisque acutis subaequalibus, labelli pubescentis limbo bilobo sepalis multo longiore; auriculis rotundatis, sacco simplici.

(A.) Flowers racemose, white, with a pink stain at the base of the lip.

(B.) *zonalis*. Flowers recemose, with a pink lip, and a broad purple band at the base.]

Ionopsis zonalis Lindl. in Paxt. l. c.

(C.) *tomentosa*. Flowers panicled, smaller than usual; white with a pink lip.

(D.) *effusa*. Flowers panicled, smaller than usual; with a nearly smooth lip.

(E.) *violacea*. Flowers deep purple, in a large contracted panicle.

The above forms, although in some respects different, do not appear to possess any clear marks of distinction. In zonalis the auricles are more fleshy than usual, and the calli are white; in tomentosa the flowers are smaller, as well as panicled, with an unusually downy lip.

Wild in tropical America; A. in Cuba Captain Sutton; C. in the Caraccas near Guarenes Funck and Schlim; D. at Sochiapam, on the frontier of the departments of Oaxaca and Vera Cruz Hartweg; E. on old coffee trees of Yatera and Mount Liban in Cuba, 2000 to 3000 feet Linden, Nr. 1760.

Obs. Specimina Swartziana juxta manus habeo. Inde omnis I. tenera est antiqua I. utricularioides cujus varietates: zónalem, tomentosam, effusam, violaceam distinguamus. Icon in Lindl. Coll. Bot. mihi specimen miserum, aegrotum refert. R. fil.

6. IONOPSIS PULCHELLA H. B. K., Nov. Gen. et Sp., pl. I., 348, t. 83, L. O. 194. L. F. 7:

I. foliis lanceolato-linearibus acutis planis coriaceis basi carinatis, scapo subsimplici, sepalis lanceolatis acuminatis patulis, petalis duplo majoribus obtusis, labelli limbo obcordato sepalis multo longiore, auriculis rotundatis, sacco simplici.

Of this I have seen no certain specimen. It appears to differ from I. tenera in having much narrower smaller leaves, and a larger lip, with long obtuse petals. The leaves, according to Kunth, are from two to three inches long, and not more than three lines broad. I now refer the Cuban plant of Linden („Orch. Lind.", Nr. 125) to tenera. An examination of original specimens can alone determine whether the two are really distinct.

Wild in New-Granada; in warm temperate places between Carthagena and Buga, on the trunks of Guava and Calabash trees, at the height of 2928 feet, flowering in October Humboldt and Bonpland.

Rchb. fil. in Bonpl. II. 14. Carabobo. 4000'. Wagener.

7. IONOPSIS GARDNERI Lindley, in Paxton's Flower Garden, sub Nr. 276. Lindl. F. sub 8:

I. foliis longis planis acutis, scapo paniculato diffuso, sepalis petalisque acuminatis subaequalibus, labelli pubescentis limbo obcordato sepalis multo longiore; auriculis semicuneatis obtusangulis, sacco simplici.

A much smaller-flowered plant, than I. paniculata, which it resembles, with very sharp instead of obtuse petals. The auricles of the lip are not rounded, but broader in front so as to resemble a blunt-angled wedge but in half.

Wild in Brazil; on trees and banks at Parahiba: March, 1841 Gardner, Nr. 5875.

8. IONOPSIS PANICULATA Lindl. in Bot. Reg. sub t. 1904. Fol. l. c. sub 9:

I. foliis lineari-lanceolatis carinatis, scapo paniculato diffuso, sepalis acutis, petalis obtusis apiculatis longioribus, labelli pubescentis limbo rotundato bilobo sepalis multo longiore; auriculis rotundatis, sacco simplici.

Epidendre paniculé Descourtils, Epid. Bras. ined. in Bibl. De Lessert, t. 54.

The scape of this fine species is above eighteen inches high, loaded towards the summit with gracefully bending branches covered with snow-white or delicate rose-

coloured scentless flowers, which, according to Descourtils, remain fresh from September or October to the following May.

Wild in Brazil — Martius; in the primaeval forests of St. Pauls—Descourtilz; near Santarem, in Para—Spruce.

Obs. In Benth. pl. Hartw. 72. planta mexicana a collect. Hartweg lecta. ad I. paniculam relata, quae nunc sub I. tenera affertur. Omnino timeo, ne tota I. panniculata varietas sit *I. utricularioidis* Lindl. per vastum Americae tropicae spatium dispersae.

1452b/. CLOWESIA *Lindl.*

Bot. Reg. XXIX. (1843.) Tab. 8. Misc. '39.

Flos subglobosus, patulus. Sepala subaequalia, lateralia paulo obliqua, in mentum breve producta, basibus connatis. Petala conformia latiora, fimbriata. Labellum concavum, carnosum, cum labello continuum nec articulatum, obsolete trilobum, margine in fimbriam glandulosam laceram solutum, disco laeve. Columna semiteres, clavata, utrinque apice obtuse cornuta, clinandrio alto carnoso serrato. Stigma: sinus transversalis. Pollinia 2, linearia, dorso sulcata, glandula subrotunda, caudicula membranacea clepsydraeformi.

Caulis carnosus, foliosus. Scapus radicalis, multiflorus, erectus. Perigonium candidum, fimbriis marginibusque roseis.

1. CLOWESIA ROSEA Lindl. l. c.:

It is a native of Brazil, and flowered at Broughton Hall, near Manchester, with the Rev. Mr. Clowes, a zealous cult. At a later period (March last) we received it from Sion Gardens (Duke of Northumberland.)

The inflorescence proceeds from the base of the stems (not apex as was formerly stated on the authority of Mr. Clowes's gardener, who thought apex signified the bottom.) —

Lindl. l. c. Misc. 39: Its flowers have the chin of the Maxillarid division, but they differ entirely from all the genera in the peculiar structure of the pollenmasses and of the petals. — Mr. Clowes's gardener says: pseudobulb is 2½" long, covered with a thin brownish white sheathing; each has 2—3 small dark brown bands, which surround it, and are apart from each other ½". Leaves 3,7" long, 1" across, lanceolate ovate, acuminate at the point, twisting a little on one side. Both leaves and pseudobulbs are in the way of Catasetum. The scape rises from the apex of the pseudobulbs.

1452c/. SUTRINA *Lindl.*

Ann. Nat. Hist. X. 1842. 184.

Perianthium cylindraceum, clausum. Sepala coriacea, lateralia fere ad apicem usque connata, basi subsaccata. Petala membranacea, conformia. Labellum liberum unguiculatum, supra basin medio elevatum, oblongum, concavum, indivisum. Columna basi teres, sursum dilatata, apice utrinque alis falcatis instructa; clinandrio antice bidentato. Anthera membranacea, semibilocularis, antice membrana lata circulari cristata. Pollinia pyriformia, solida, caudiculae lineari in glandulam longissimam setaceam incumbenti affixa.

Herba glabra, epiphyta, pseudobulbosa, foliis solitariis coriaceis, spica multiflora pendula.

Near Macradenia. This very curious genus is probably related to Macradenia, but its habit and structure are in all respects very peculiar. The gland resembles a long bristle or cobbler's awl and projects beyond the column extending as far as its long falcate arms. The anther, which is globose, where the pollen lies, is furnished in front with a broad circular crest.

1. SUTRINA BICOLOR Lindl. l. c. p. 185:

Pseudobulbi parvi, ovati. Folia 2—3 pollices longa, ovalia, subsessilia. Spica 3—4 pollices longa. Bracteae breves squamaeformes. Flores 7 lineas longi. Sepala oblonga apiculata apice recurva, verosimiliter viridia. Labellum apice rotundatum, crispum, luteum.

Peru, Matthews, herb. Hooker.

1453. DIADENIUM *Pöpp. Endl.*

Nov. Gen. et Sp. I. Tab. 71! p. 41.

Rchb. fil. Xenia I. p. 13. Tab. 6. Ill. 13—23:

Diadenium gynostemio superiori Rodrigueziaceis haud alienum, mento tenuissimo in calcar spurium extenso ac labelli insertione ab omnibus longe dissimile Pelexiam inter Vandeas ludens.

Flos tenuimembranaceus, clausus. Sepalum summum lanceolatum acutum; sepala lateralia subaequalia basi tamen producta in calcar extinctoriiforme acutum antice usque regionem supraapicilarem fissum. Tepala cuneato ovata acuta. Labellum panduratum, antice rotundatum; anguli postici erecti, callo parvo interjecto; in unguem linearem lamina longiorem extensam auriculis acutis retrorsis parvis suprabasilaribus sagittatum; insertum in ipso sinu tepalorum lateralium antice confluentium supra basin calcaris omnino Pelexiae more. Gynostemium semiteres, gracile: margine pone foveam utrinque arcuato excisum, infra foveam ellipticam producto unigibbosum, dein iterum angustatum in nervum medium calcaris extinctoriiformis evanescens; cum tepalo summo parallelum; androclinium oblique adscendens, hinc lobulatum; rostellum lineare, retusum, descendens intra angulos anticos gynostemii. Anthera ovata, antice attenuata, retusa, inferne limbo reflexo submarginata, prope unilocularis; pollinia et basin caudiculae tantum tegens. Pollinia depresso pyriformia, sessilia in disco caudiculae. Caudicula a basi rotundata denticulata longe attenuata in apicem linearem, retusum, sessilem in glandula rotunda minuta.

DIADENIUM MICRANTHUM Pöpp. Endl. Nov. Gen. ac Sp. I. Tab. 71. p. 41.

Pseudobulbus minutus, vix semipollicaris, a vaginis laxis et folio uno cuneato oblongo acuto stipatus, apice folio illi subaequali monophyllus. Pedunculus axillaris in folio summo stipante, gracilis, teres (ramosissimus? tota, quam cl. Pöppig pinxit inflorescentia producta est ex axilla vaginae a basi quartae pedunculi, dum decisa est tota pars superior inflorescentiae!!), rarivaginatus, vaginae apice acutae; ramus lateralis, qui suppetit superne secundo paniculatus; rami ramulique tenues, bracteae triangulo acuminatae brevissimae. Flores hyalini, ab apice sepali summi ad calcaris apicem lineam curvam subsemipollicarem describentes, rosei fuisse videntur.

Die Originaletikette des Wiener Museums sagt: „Unicum specimen legi! Peruvia subandina. Supra arbores. Cuchero. Febr. 1830." Das Exemplar ist mit einer leimigen Masse zusammengeklebt, doch dürften die beschriebenen Verhältnisse richtig sein. Die Blüthen sind sehr gequetscht und nur wenige vorhanden. Einen unerklärlichen Widerspruch bietet die Angabe a. a. O.: „Crescit in Peruviae sylvestribus arboribus convallium ad Cuchero, v. c. ad pedem Cerro de S. Christobal." Das „v. c." lässt auf allgemeine Verbreitung schliessen. Keiner der andern Sammler, welche Peru bereisten, scheint diese Pflanze je erspäht zu haben, selbst die scharfsichtigen Ruiz, Pavon und Dombey nicht.

1454. COMPARETTIA *(Pöpp. et Endl.)* Lindl.

(Nov. Gen. et Sp. I. 43. t. 73.) B. Reg. XXIV. (1838). 68.

Perianthium ringens. Sepalum intermedium et petala nana, libera, subgaleata; lateralia in unum connata calcaratum labello suppositum.

Labellum liberum, explanatum, obcordatum, unguiculatum, basi calcaribus duobus intra sepalorum calcar absconditis. Columna libera, erecta, mutica. Pollinia 2, postice foveata, caudiculae uncatae rostratae adnata. Herba epiphyta, pseudobulbosa, racemis terminalibus.

„Named after Andreas Comparetti, Prof. at Padua, who first understood the real nature of spiral vessels, and who wrote with great skill upon Vegetable Physiology." Pöpp. and Endl.

1. COMPARETTIA FALCATA Pöpp. Endl. l. c. Tab. 73: Lindl. in Benth. Pl. Hartweg 931: in montibus Arcutuno et Medio Monte Mexici. Hartweg. — Lindl. Orch. Lind. p. 24: „an epiphyte on the Psidiums and Crescentias, in the neighbourhood of Merida 5000'. Flowers bright carmine" 658. Linden. — Rchb. fil. in Bonpl. II. 280: Ocanna. Juni 4—5000'. N. 747. Schlim! — Rchb. l. c. Bonpl. 66. Ocanna 4000'. März. Wagener. — Bot. Mag. 4980.

Huc: *Comparettia rosea* Lindl. Bot. Reg. XXVI. (1842.) Misc. 186:

Foliis subsessilibus, racemo pendulo laxo paucifloro, labelli lamina subrotundo-oblonga, calcare subulato breviore.

Little delicate O. from the Spanish Main, with a slender drooping stem, bearing out 4—5 flowers of a bright rich rose colour near its apex. Lodd. (N. 752). — Van Houtte Fl. S. II. Fasc. 5. tab. 6.

2. COMPARETTIA COCCINEA Lindl. Bot. Reg. XXIV. (1838.) 68:

Foliis angustis, coriaceis apice obliquis acutis, sepalo antico acuto calcare falcato duplo breviore, labello obcordato subrepando basi bilamellato calcaribus subulatis ciliatis, columna medio sub stigmate elevata.

This beautiful and very rare epiphyte flowered with Loddiges and is said to be a native of Brazil; it however agrees so entirely with dried specimens collected near Xalapa and now before me, that some mistake is to be suspected in its reputed country.

Perigonium flavo rubrum, labellum scarlatinum; folia subtus violacea.

Comparettia consists at present of this and two other species inhabiting Peru. Of these C. falcata approaches the present subject in many respects. It, however, appears to differ in having broader leaves, larger flowers, no elevated plate at the base of the stigma and the spurs of the lip smooth. Struct. of labellum and sepals as in Aconitum.

1454 b. SCELOCHILUS *Klotzsch.*

Allg. Gtz. 1841. 14. Aug. — Inde: Lindl. Bot. Reg. XXXVIII. (1842). Misc. 23.

Perigonii conniv. foliola exteriora conniventia, carinata, basi leviter coalita, lateralia labello supposita, usque ad apicem connata, ad basin in calcar obtusum producta; interiora exteriori, postico aequalia. Labellum integrum, inferne attenuatum basi bifidum, infra basin columna obsolete continuum, ad marginem infra medium bicorne, disco calloso, puberulo, antice bidentato, dentibus obtusis conniventibus. Columna semiteres, apice subemarginata. Anthera unilocularis. Pollinia 2, solida, sphaerica.

Herba caracasana, epiphyta; rhizomate caespitoso, pseudobulbis subnullis; foliis solitariis, coriaceis, carinatis, basi vaginis squamaeformibus, conduplicatis involucratis; racemo radicali; floribus compressis flavidis.

1. SCELOCHILUS OTTONIS Klotzsch Allg. Gartenztg. 1841. Aug. 14. Lindl. l. c.:

Foliis oblongis coriaceis, laete-viridibus margine acutis, subundulatis, apice conduplicato-acutissimis, recurvis; racemo radicali, subramoso,

folio parum longiore: foliolis perigonii interioribus oblongis, obtusis, intus purpureo-striatis sparsimve pubescentibus.

Flower spike a little branched, slightly longer than the leaf, round, threadlike, smooth, and covered by sessile, dry, membranous lanceolate and acuminate bracts. Flowers short-stalked, yellow, compressed, 7" long. The column is without colour, twice as short as the floral envelopes. Introduced 1840 by Mr. Edward Otto. He discovered it on his journey upon the Silla of Caracas, where he found it 5600 feet above the level of the sea, in thick woods on the trunks of trees. Fl. Maj. — Lk. Kl. Otto II. (1842.) tab. 31. Rchb. fil. Bonpl. II. 14. Caracas. Wagener!

2. SCELOCHILUS STENOCHILUS Rchb. fil. Mss. Huc: *Rodriguezia stenochila* Lindl. Orch. Lind. 1846. p. 23:

Foliis oblongis planis, racemo laxo erecto, paucifloro, floribus divaricatis, sepalo inferiore bilobo obtuso calcarato, labello angustissimo apice hastato basi sagittato, columna aptera.

„An epiphyte from the forests of Jaji. Flowers pale yellow, streaked with red. Venezuela, at the height of 6000'. July 1842." N. 659. Of this species I have only a leaf and a couple of loose scapes; the latter are about 8 inches long, with 2—3 sharp keeled distant sheaths, and 4 flowers, about the size of those of R. secunda. The very narrow lip and thick lumpish column are quite peculiar.

Scelochilus Lindeni Lindl. Paxt. Fl. G. III. p. 88.

Obs. Moneo tamen, me ex horto Lindeniano tenere iconem pictam „Rodriguezias stenochilae", quae certe refert Scel. Ottonis. Rchb. fil.

3. SCELOCHILUS JAMIESONI Lindl. Paxt. Fl. G. III. 88. sub 55:

Foliis oblongo lanceolatis acuminatissimis pergameneis, scapo brevioribus, racemo brevi ancipiti, bracteis setaceo acuminatis pedicellis longioribus, sepalis lateralibus semiconnatis acuminatis, calcare inflato rotundato, petalis lanceolatis, labello obovato concavo apiculato basi calcare brevi didymo, brachiis 2 incurvis pone basin.

Quito. Dr. Jamieson 1848. — The form of the lip cannot be determined from the examination of the only flower at our disposition. It seems to be naked.

4. SCELOCHILUS SACCATUS Rchb. fil. Mss.:

Pseudobulbis angusto ligulatis pollicaribus, a squama oblonga acuminata fultis, foliis cuneato oblongolanceolatis acuminatis, pedunculis paucivaginatis apice racemosis, bracteis lanceis acuminatis ovaria pedicellata subaequantibus, floribus illos praecedentium aequantibus, sepalo dorsali ligulato lanceolato acuto, sepalo inferiori subaequali acuto bifido, basi in saccum subsphaericooblongum inflato, tepalis cuneato oblongis acutis, labelli basi ima bicalcarati ungue elongato, lamina flabellata obtusata, aequilonga, falculis extrorsis duabus in limitibus unguis ac laminae, gibberibus divergentibus duobus in lamina; columna gracilenta paulo breviori, medio angulata. Comparettia saccata Pöpp. Endl. I. tb. 72.

Me judice jam ipso sacco et falculis medianis a praecedentibus bene diversa. Peruvia subandina supra arbores. Cuchero Febr. 1830. Pöppig! (Juxta typos!)

1454/2. QUEKETTIA *Lindl.*

Bot. Reg. XXV. (1839.) Misc. 6.

Perianthium cylindraceum, sepalis linearibus aequalibus basi gibbosis, lateralibus connatis, petalis linearibus aequilongis. Labellum oblongum, integrum, muticum, cum labello parallelum, basi excavatum bicallosum.

Columna semiteres, erecta, apice utrinque auriculata. Anthera unilocularis. Pollinia 2, postice excavata; caudicula lineari, glandula minuta.

Lindl. Fol. 1 Oct. 14. 1852: A singular little plant, with the habit of a Pleurothallis; is nearly related to Ionopsis, but is different in habit, and is essentially distinguished by its lip being not only parallel with the column throughout its whole length, but excavated at the base, and furnished there with two callosities like those of Spiranthes. Its column is, moreover, long and narrow, and has two long membranous recurved ears hanging down from the apex. The lip has no trace of the auricles and calli of Ionopsis, nor are the lateral sepals united into a pouch; they are, however, slightly joined at the base, and gibbous there.

1. QUEKETTIA MICROSCOPICA Lindl. B. Reg. l. c.:

Folia teretia maculosa. Panicula capillaris, tripollicaris. Flores parvi, flavi. Sepala linearia obtusa et labellum oblongum acutum cellularum majorum latearum in medio raphidaphororum copia repleta. Columna linearis, petalorum fere longitudine auriculis acutis inflexis.

It gives me great pleasure tó name this curious plant after Edwin J. Quekett Esq. F. L. S. an excellent Botanical observer, and one of our most skilful anatomists. I am already indebted to that gentleman for some valuable facts concerning raphides: a plant therefore in which these crystals form a conspicuous part of the structure may not be inappropriately selected to bear his name.

A very singular little plant, with the habit of Pleurothallis, pollenmasses of a Vandeous O., more allied to Rodriguezia, than to any thing else, but quite different in habit and essentially distinguished by its cylindrical perianth, and labellum not only parallel with the auriculate column throughout its whole length, but excavated at the base and furnished there with 2 callosities like those of Spiranthes. Its leaves are terete, subulate, about 3'' long, and beautifully mottled with light green, and purple, 5'' high. Fabric of leaves below the epidermis! Flowers abound in raphides clustered in cells larger than those, which surround them, and of a different colour, so that the flower, when examined with low powers of the microscope looks as if it were dotted. I have observed this in Liparis pendula (Bot. Reg. 1838. Misc. 128) and in Bolbophyllum fuscum (XXV. 1839. Misc. 5.) and it will probably be found a common structure in the sepals and petals of O. as we already know it is in their leaves and stems. This caudicula is excellently adapted to show the cellular nat. of that part and to explain upon what plan it is formed in other cases.

Lindl. Fol. l. c.: Wild in Brazil. Loddiges. (v. v. c.). Leaves terete, subulate, about three inches long, mottled with light green, deep green, and purple. Panicle about three inches long, with a few capillary arms, and minute ovate acute membranous bracts. Flowers nearly sessile, cylindrical, two-tenths of an inch long, white. Sepals linear acute; the laterals very slightly united and gibbous at the base. Petals of the same length and form. Lip parallel with the column, oblong, rather narrowed to the base, membranous, at the base itself hollowed out, downy on the anterior edge, and furnished at the foot of the column with a pair of callosities. Column linear, erect, with a pair of falcate obtuse ears curved downwards from either side of the stigma, which is a mere transverse cleft.

1455. RODRIGUEZIA *R. Pav.*

Fl. Peruv. Prodr. 115. t. 25.

(In L. O. 194. infauste cum Gomeza R. Br. commixta).

Burlingtonia Lindl. Bot. Reg. XXIII. (1837.) 1927:

Perianthium membranaceum, convolutum, obliquum. Sepala unguiculata, labello breviore, basi a petalis distincta; lateralia basi concava,

connata, labello supposita. Petala unguiculata, labello parallela, sepalis longitudine aequalia, sed latiora. Labellum unguiculatum, bilobum, basi cornutum aut muticum, cum columna parallelum, apice dilatatum; ungue canaliculato, lamellato. Columna teres, longe clavata, nunc apice appendicibus duabus, coloratis aucta; clinandrio dorsali, stigmate utrinque cornuto. Anthera unilocularis. Pollinia 2, postice excavata, caudiculae subulatae elasticae adnata. — Herbae epiphytae, pseudobulbis 1—2phyllis, basi foliatis.

Those, who have the honour to be acquainted with the Countess of Burlington will feel, that no compliment was ever more justly conveyed, than in the dedication of those most lovely flowers to the amiable and accomplished Lady, whose name they are hereforth to bear.

In many respects it agrees with the genus Rodriguezia, especially in its lower sepals being united in one, in its lip having a short horn at the base, in the column being taper, and in the structure of the pollenmasses; and I was first disposed to refer it thither; but its membraneous and convolute (not herbaceous or coloured and spreading) flowers, its unguiculate (not sessile) petals and sepals, its long slender (not dwarf) column, and its membraneous 2lobed lip, so much longer, than the other parts, have satisfied me, that it is a truly distinct genus.

Rchb. fil. in v. Schl. Bot. Z. 771:

Perigonium carnoso-membranaceum, subpellucidum. Phylla superiora subaequalia, lateralia interna latiora, infima coalita, vulgo apice bifida, naviculari-excavata, basi saccato-descendentia ab origine. Labellum ima basi cum gynostemio connatum, cum illo parallelum, sessile, inferne in calcar solidum productum, subconnivens, in phylla externa infima incumbens; a basi angustiori antice obcordato-dilatatum; venae centrales cristigerae. Gynostemium teretiusculum, gracile, apice clavatum, utrinque in brachia ascendens carnosa, alaeformia, vulgo antice producta et sub angulis androclinii, et sub fovea stigmatica. Androclinium ellipticum, triangulum, margine postico et utroque angulo angulatum, anguli nunc auriculati producti, nunc abbreviati; fundo excavatum. Rostellum ascendens, triangulum, apice bidentatum. Stigma in fovea inter rostellum et brachia illa absconditum. Anthera oblongo-mitrata, dorso medio vulgo elevatulo, tumido, intus linea transversa dimidiata in partem polliniferam et caudiculigeram, linea cruciante loculorum confinia indigitante. Pollinia 2 globosa, seu oblongo-globosa, basi excisa fissa. Caudicula linearis, basi dilatata. Glandula oblonga, rostelli ventri appressa.

Rchb. fil. l. c. 770: De Gomeza R. Br. falso Rodriguezlae substituta et R. „Burlingtonia" inde false nominata.

1. RODRIGUEZIA SECUNDA H. B. Kth. N. G. et Sp. I. Tab. 92. — B. R. 930. — B. M. 3524. — *Pleurothallis? coccinea* Hook. Ex. 129. — *Rodr. lanceolata* B. Cab. 676.—

2. RODRIGUEZIA CARNEA Lindl. B. R. XXIX. (1843.) Misc. 113.

Pseudobulbis compressis ovalibus, foliis lanceolatis canaliculatis acutis, racemo secundo folio breviore ascendente, sepalo supremo fornicato, inferiore bidentato, petalis ovatis, obtusis, labello juxta basin aurito disco interrupte bilamellato apice cuneato emarginato, columna elongata basi lanata.

Columbia. Linden 1842. very like a small pale specimen of R secunda; but it differs in having but 2 raising plates on the bend of the labellum and in its column being unusually long and woolly. Spec. Rev. J. Clowes. The foliage much the same as that of Rodriguezia secunda, but narrower.

3. RODRIGUEZIA STANGEANA Rchb. fil. in Otto Hamb. Gtz. 1857. p. 814.

4. RODRIGUEZIA MACULATA Rchb. fil. in v. Mohl. Bot. Ztg. 1852. 771. Huc: *Burlingtonia maculata* Lindl. Bot. Reg. XXV. (1839). 44:

Racemis pendulis, sepalo anteriore emarginato; supremo sepalisque ovato-oblongis undulatis acutis, lamellis labelli cristatis dentatis, labello bilobo undulato denticulato versus unguem lacero, foliis lineari-lanceolatis.

Pseudobulbi ovales compressi monophylli basi aphylli; foliis lineari-lanceolatis striatis rectis. Pedunculi penduli, racemosi, foliorum longitudine; bracteis ovario dimidio brevioribus. Flores odorati, lutei, cinnamomeo colore, maculati, in genere parvi; labellum caeteris longius, basi album, lamellis 3 inaequaliter dentatis carnosis parallelis antice abrupte truncatis. Columna ungue labelli brevior eique appressa, clavata, semiteres, apice utrinque bicornis sanguinea. Brazil. Loddiges 38.

Obs. Noli hanc ex nomine confundere cum *Rodriguezia maculata* Lindl. (*Leochil. oncidioide* Kow. Westc., *Oncidio macranthero* Hook.).

5. RODRIGUEZIA PARDINA Rchb. fil. in v. Mohl und v. Schl. Bot. Z. 1862. 428.

6. RODRIGUEZIA DECORA Rchb. l. c. p. 771. Huc: *Burlingtonia decora* Lemaire Jard. Fl. II. sub 188:

Caule gracili elongato bracteato longissime radicante pseudo-bulbifero-ramoso; pseudobulbis ovalis subsulcatis plurisquamatis apice unifoliatis; folio lineari-oblongo coriaceo basi striato, obtuso, bracteis amplectentibus, scariosis uno latere fissis; squamis equitantibus; laciniis perigonii inaequalibus connatis ovali-acutis conniventibus, lateralibus majoribus, omnibus albis roseo-pictis, labelli ungue angusto longissimo disco nudo canaliculato lateraliter dentato, lobo terminali dilatato albo alte bilobulato, gynostemate appendice capitato quadricornuto.

Patria: Brasilia prov. St. Paul, Mathieu, Libon.

Burlingtonia decora Lem. — Planch. in Van Houtt. Fl. S. VII. 716:

Glaberrima, caulibus teretibus gracilibus interrupte pseudobulbiferis, pseudobulbis compresso ancipitibus ovatis apice monophyllis (aliis basi praeter squamas folio uno stipatis) sulcatis, foliis linearilanceolatis, racemis basilaribus (terminalibusve) inferne unibracteatis, apice laxe 3—5-floris, sepalis inferioribus tertia parte connatis, calcare conico circiter 2″ longo, labelli ungue basi canaliculato denteque utrinque aucto a medio ad apicem fimbriis pinniformibus puberulis ornato, limbo dilatato bilobo candido (caeteris perianthii partibus roseis purpureo maculatis), staminodiis antenniformibus pilosis rubris gynostemio aequalibus, styli cornubus glabris staminodiis plus duplo brevioribus.

B. decora Ch. Lam. Jard. Fl. II. 1852. t. 188. — *B. amoena* Planch. 1851. Hort. Houtt.

Brasil St. Paul. Libon coll. de M. de Jonghe. — B. Mag. 4834. Paxt. Fl. G. III. Xyl. 278.

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7. RODRIGUEZIA RIGIDA Rchb. fil. in v. Mohl und v. Schl. B. Z. 1852. 771: *Burlingtonia rigida* Lindl. Bot. Reg. XXIII. (1837.) sub 1927:

Caulibus teretibus rigidis durissimis, erectis, per longa intervalla proliferis, pseudobulbis obovatis compressis monophyllis, foliis oblongis, scapo longo rigido apice racemoso, labello basi mutico disco sparse lamellato, columna pubescente appendicibus 2 falcatis erectis pilosis aurita.

Found in Brasil, near Villa Nova de Almaida, by Prince Maximilian of Wied Neuwied and preserved in the Brazil. Herbarium of Dr. v. Martius. This singular plant has stiff, apparently erect stems, the thickness of a crow's quill, which throw out pseudobulbs at intervals of from 1½ to 2 feet; each pseudobulb pushes forth its own roots, which are extremely long and as fine as hairs; and gives birth to a scape of the same thickness and texture as the main stem, a foot and half long, at the tip of

which are clustered 5—6 flowers, the size of those of Burlingtonia nivea with the perfume of violets.]

Hook. Lond. Journ. 1842. p. 189: On Crescentia Cujete at Rio Campride. Septbr. Lindl. Sert. N. 36.:

Caule erecto ramoso tereti distanter sobolifero, foliis ovato lanceolatis acutis, racemo simplici nutante, bracteis oblongis acuminatis, labelli bilobi lobis approximatis.

Rio Janeiro. 125. Gardner. Tufts of 2—3 leaves, ovato lanceolate, rigid, petiole is thin, folded together in an equitant manner, articulated with the lamina. In the middle of these leaves appear a short branch in form of a pseudobulb, oval, thin and furrowed, on whose apex arise one or occasionally 2 leaves, like the first in form, but without the equitant petiole. The plant having advanced to this point and succeeded in establishing itself on the branch of a tree by means of numerous fine rather stiff roots, it next produces, from the axil of one of the lower leaves a rigid stem, slender and as thick as a crow's quill, which rises erect into the air forming 2—3 membranous sheaths upon its surface; and ceasing to grow as soon as it has 8—10''. At its apex it developes just such a tuft of leaves as that from which it sprang: and thus the plant continues to live till the period of flowering has arrived. It emits from the axils of one of its lower leaves a flowering stem or scape, 6—8'' long, having few distant membranous scales bearing at the apex a very short umbel-like raceme of several large white flowers delicately tinged with pink. Bracts ovate, acuminate, membranous, rather longer than the pedicels. Sepals shorter than petals, uppermost oblong, acute, pressed close to the back of the petals, lowermost are united into a single piece, corresponding in form with the upper, slightly split at the point, pressed close up to the lip, and extended at the base into a short spur, which is notched at the point. — Petals oblong, wavy, parallel with the column and lip, rounded and spreading at the point. Lip longer than the petals, broadly obovate, 2 lobed, wavy, narrower at the base into a stalk, which is introduced within the spur formed by the 2 lower sepals; near its base it has 4 short wavy elevated plates placed in unequal pairs, on each side of two slightly elevated lines. Column is parallel with the base of the lip, clubshaped, tapering and hairy, much shorter than the petals, at the upper end on each side stands along membranous narrow ears guarded in front by a curved tooth of considerable size. Within these teeth is stationed a glutinous circular excavation, which is the stigma. The anther is rounded, uncrested, abruptly cut off in front. Pollenmasses two, excavated at the back, and placed upon a long obovate strap or caudicula, attached to a small oval gland. Column deprived of all parts is alike a bat's head and neck. Brazil. Travellers report it to have a delicious scent of violets. I did not perceive it.

8. RODRIGUEZIA OBTUSIFOLIA Rchb. fil. l. c. Huc: *Burlingtonia obtusifolia* Lindl. Sert. (1840.) sub 36:

Caule erecto ramoso tereti distanter sobolifero, foliis oblongis obtusiusculis, racemo subpaniculato nutante, bracteis subulatis, labelli bilobi lobis distantibus rotundatis. Aff. B. rigidae.

Organ Mountains. Gardner 664. Leaves smaller, narrower, obtuse, flowers smaller, inflorescence slightly panicled. — Lindl. in Paxt. Fl. G. I. 99. N. 569: It is in reality very near B. rigida, from which it only differs in the ears being blunter and longer, the leaves smaller, narrower, more blunt, tapering to the base, the flowers smaller and the lateral lobes of the lip much narrower. In this plant, B. decora, however we have according to the authors above quoted, much smaller flowers, a simple conical, not twolobed spur, short very sharp sepals and petals and a pair of great lacerated appendages at the base of the lip, to say nothing of the spotting, which is so much unlike anything known among the Burlingtonias except maculata.

9. RODRIGUEZIA BATEMANI Pöpp. Endl. N. G. Sp. Vol. I. t. 70. Huc: *Burlingtonia rubescens* Lindl. B. Reg. XXIII. (1837). sub 1927:

Racemis erectis, sepalo anteriore integerrimo lineari-lanceolato patente supremoque acuminatis, labello basi auriculato bilamellato.

Delicately spotted with rose colour. Inhabits the trunks of the Calabash trees in the mission of Yurimaguas, in the province of Maynas, the hottest part of Peru, and is loaded with blossoms all the year long. Peru. Pöppig.

10. RODRIGUEZIA FRAGRANS Rchb. fil. l. c. Huc: *Burlingtonia fragrans* Bot. Reg. XXIII. (1837.) sub 1927:

Racemis erectis, sepalo anteriore integerrimo, supremo acuto, labello postico cucullato supra unguem bilamellato, disco pubescente elevato apice tridentato.

Seated upon the highest branches of Cedrela tree perfumes the forests of the same country with the odour of Jonquils. Brazil in the districts of Morro-Quemado and Macabé, and in the neighbourhood of the town of Boru Jesu de Bananal; Descourtilz drawings Nr. 12.

Lindl. Sert. 11. (1838): Column taper club-shaped upwards, prolonged on each side of the stigma into a short flat horn, white, about half as long as the lip, with 2 short purple conical ears on a level with the apex of the anther. Anther slopes backwards upon the end of the column, is hemispherical and divided into two cells by a perpendicular partition; at the apex it is dilatate and hollowed out to secure an oval yellowish gland, to which adheres a curved strap having 2 deep yellow pollen-masses. — (Comparata ibi cum R. venusta). Leaves more obtuse, raceme of flowers erect, labellum standing at the back, and the little ears at the end of the column almost obliterated. Epidd. parduriforme Desc.

11. RODRIGUEZIA PUBESCENS Rchb. fil. l. c. Huc: *Burlingtonia pubescens* Lindl. Cf. Walp. Ann. III 554. Praeterea l. c. Lindleyano: Snow white. Appears to be very rare at Pernambuco. Flowers erect. — Burlingtonia pubescens: downy column; lip with 3 yellow ridges on each side near the base, a pair of erect side lobes, rendering it what is technically called hastate. Small flowers.

12. RODRIGUEZIA BAHIENSIS Rchb. fil. Bonpl. II. p. 90:

Aff. quoad florem R. secundae, qua paulo major; dentibus labelli parvis posticis, lobo medio ab ungue anguste cuneato quadrato bilobo, lamellis 2 per unguem, 2 mediis anterioribus; flore candidissimo, callis et macula utrinque in angulis gynostemii aurantiacis.

Sepalum summum oblongum acutum, infimum excavatum oblongum acutum; tepala oblonga acuta; labellum ima basi infra valde corniculatum, linearilingulatum, antice in laminam quadratam sensim dilatatum, apice bilobum, latera minute crenulata, auriculae angulatae utrinque pone basin; lamellae 4 erectae xanthinae ab auriculis in discum lobi medii, externae quidem abbreviatae, internae antrorsum progredientes; gynostemium gracile, glabrum, brachia deflexa, denticuli minutissimi inter brachia sub fovea, callus maximus semirotundus in androclinio. Bahia, eingeführt von Herrn Senator Jenisch, cultivirt von Herrn Kramer.

13. RODRIGUEZIA VENUSTA Rchb. fil. l. c. Huc: *Burlingtonia venusta* Lindl. Bot. Reg. XXIII. (1837.) sub 1927:

Racemis pendulis, sepalo anteriore integerrimo, supremo acuto, labello infra medium transverse plicato.

One of the Burlingtonias, B. venusta, may be litterally said to sink beneath its long heavy clusters of snow-white blossoms, just tinged with pink.

Brazil.-Descourtil's drawings N. 88. — Lindl. Sert. Tab. 12: Column with two short conical purple ears on a level with the apex of the anther.

var. *ionoleuca* Rchb. fil. Bonpl. III. 215:

Valde similis R. venustae (Burlingtoniae venustae Lindl.), major, gynostemio crasso breviori bene puberulo, staminodiis rhombeis antice erosulis, labello antice sinu lato bilobo, sepalo inferiori bidentato.

Racemus pendulus decemflorus. Sepalum summum lanceolatum acutum; sepalum inferius naviculare, postice saccato refractum, apice bidentatum. Tepala cuneato oblonga acuta. Labellum sub basi bene cornutum, a basi cuneata panduratum, lobi postici trianguli, antici extrorse rhombei denticulato sinu magno interjecto cum denticulo in fundo; lamellae 2 parallelae per discum, lamellulis seriatis parvulis decrescentibus utrinque in basi. — Blüthen weiss: äussere Hüllblätter und Fruchtknoten hell violett angelaufen. Drei sehr genäherte orangefarbige Streifen auf der Lippe vor den zwei Leisten, welche selbst ebenso gefärbt sind. Die übrigen Leistchen hell violett. Diese Pflanze erscheint hier und da als Burlingtonia fragrans in Gärten. Die Rodriguezia fragrans Rchb. fil. (Burlingtonia fragrans Lindl.) ist durch behaarte, vorn dreizähnige erhabene Lippenleiste und aufrechte Blüthentrauben unterschieden. Wir sahen sie nie. Letzter Charakter ist nicht viel werth. Das lezterhaltene Exemplar stammt aus dem Garten des Herrn Pescatore. Cultur des Herrn Lüddemann.

Lindl. Paxt. Fl. G. I. 158: Burlingtonia venusta: smooth column, lip not hastate, with many shallow ridges on each side near the base. Flowers larger than in B. pubescens, more loosely arranged.

14. RODRIGUEZIA CANDIDA Bat. in litt. Bot. Reg. XXIII. (1837). 1927. *Burlingtonia candida* Lindl. l. c.:

Racemis pendulis, sepalo anteriore bilobo, supremo petalisque obtusis, labello seriebus duabus lamellarum carnosarum in disco.

Rodriguezia candida Batem. in litt.

Folia oblonga, apicem versus paulo latiora, subcanaliculata, solitaria. Racemus pendulus, quinqueflorus. Flores candidi membranacei, semidiaphani, venis quibusdam luteis in labello, duos pollices longi. Sepalum supremum obovatum, planum, emarginatum, inferius canaliculatum, bifidum, basi concavum, ad calcar incurvum labelli recipiendum, a petalis distinctum. Petala obovata, apice patula, circa columnam voluta. Labellum cum columna parallelum, ungue canaliculato, apice utrinque unidentato, apice dilatatum subcuneatum, bilobum, venis lutescentibus ornatum; lamellis pluribus distichis carnosis in disco, quarum anteriores multo longiores. Columna gracilis, teres, clavata, apice dentibus duobus carnosis stigmati adstantibus, clinandrio declivi immarginato.

Lindl. Paxt. Fl. G. I. p. 158. Burlingtonia candida has a smooth column; lip very slightly hastate, a stalk two thirds as long as column, and one ridge on each side, forming a broken row of callosities. Flowers much fewer in each bunch, twice as large as in B. venusta.

15. RODRIGUEZIA LANCEOLATA R. Pav. Fl. Peruv. Prodr. 219. Rchb. fil. in Bonplandia IV. 218.

16. RODRIGUEZIA ENSIFOLIA R. Pav. Fl. Peruv. Prodr. 218. Rchb. fil. in Bonplandia IV. l. c.

17. RODRIGUEZIA GRANADENSIS Rchb. fil. l. c. *Burlingtonia granadensis* Lindl. Orch. Lind. 1846. p. 24:

Foliis oblongis acutis, racemo erecto (?) 5-floro, bracteis minimis, apiculatis, labello bilobo subrhombeo trilamellato basi unidentato, columnae alis 2 erectis laceris, 2 latis truncatis porrectis duplo majoribus.

„Leaves fleshy; flowers white, or in a variety yellowish. An epiphyte on Psidiums, between China cota and Chopo, in the prov. of Pamplona, at the height of 2500.

April." (N. 1260.) A finer species with flowers 1½" long. The lower sepal is bent backwards, so as to resemble a pendulous boatshaped process.

Rchb. fil. Bonpl. III. 66. Ocanna. 5000'. März. Wagener.

18. RODRIGUEZIA REFRACTA Rchb. fil. l. c. *Burlingtonia refracta* Lindl. Garden. Chronicle 1853. 22. Oct. 679 b.:

Sepalo anteriore integerrimo acuminato refracto calcar depressum spatulatum involvente, petalis obovalis apiculatis apice recurvis, labello apice semicirculari emarginato medio constricto infra medium undulato, lamella duplici carnosa plana in discum lineisque 2 elevatis utrinque, columnae glabrae alis calvis 2 linearibus erectis, 2 oblongis dimidiatis porrectis.

Stemless. No beauty. Recurved 5—7 flowered racemes, shorter than the solitary oblong leaves. The scentless flowers are dirty white, a little stained with purple, about as large as in B. candida. The double front sepal, instead of curving upwards beneath the lip, is directed backwards, and entirely envelopes a long narrow depressed spur. The small wings of the column are sometimes longer, sometimes shorter, than the anther, the front of which is blunt and hooked downwards. The elevations of the lip are spotted with dull red. We received a live specimen from Mr. Skinner. Dried specimens: Santa Martha Purdie.

Dubia.

Burlingtonia nivea Lindl. B. R. 1927. (lin. penult. descr. Burlingtoniae rigidae) calami lapsu pro candida? Certe.

1457. MACRADENIA *RBr.*

Bot. Reg. 612. (1822).

1. MACRADENIA LUTESCENS RBr. l. c.

2. MACRADENIA TRIANDRA Lindl. Bot. Reg. XXI. (1836.) 1815:

Foliis coriaceis lineari-oblongis acuminatis, racemo prostrato, labello in medio trilamellato, clinandrio serrato, antheris duabus sterilibus.

Pseudobulbi cylindracei paulo attenuati. Folia plurivenia. Racemi foliis multo breviores. Sepala et petala intus sanguinea herbaceo limbata. Labelli lamellae rotundatae, costaeformes, antrorsae, crassiores. Antherae steriles ovales, integrae, sanguineo marginatae.

Obs. Forsan huc pertinet: *Rhynchadenia* A. Rich. in Ramon de Sagra Cub. 248.

Sepala externa libera, subapproximata, aequalia, supremo concavo, omnia apice apiculata; interna (petala) subsimilia, paulo angustiora, aequilonga; labellum basi cum gynostemio continuum nec articulatum, parallelum, semicanaliculatum, sensim ampliatum, apice truncatum, hinc et illinc obtusum, ligulatum, ligula abrupta linearis acuta, trinervia, revoluta. Gynostemium elongatum, arcuatum, margine apiceque alatum; ala terminalis ampla, inaequaliter dissecto denticulata; rostellum elongatum angustum, glandula oblonga elliptica terminatum; pollinia 2 integra in caudicula tenui membranacea, postice lata, sensim attenuata et longe angustata lineari insidentia; glandula terminali.

Herbae epiphytae. Pseudobulbi parvuli ovoideo oblongi longe attenuati, apice monophylli; scapus radicalis 1—3 florus.

Rhynchadenia cubensis A. Rich. Tab. 85:

Foliis elliptico lanceolatis acutis submembranaceis, basi articulatis; scapo radicali folio breviori, 1—3flore, simplici aut bifido; floribus parvulis pallide purpureis.

Cuba.

Obs. El genero que denominamos Rynchadenia, ocupa un lugar medio entre los generos Ornithidium y Ornithorynchus*). Difiere del primero por un gynosteme concavo en il vertice y cuyos bordes estan dislacerados, por su largo rostellum, por sus dos masas polinicas sentadas sobre una caudicula muy larga, adelgazada en punta y rembriendo el rostellum, terminada por una glandula peltada. Difiere del segundo, por su gynosteme elargado, sus dos masas polinicas solamente y no cuatro; dispuestas en cruz y sobre todo par su porte.

3. **MACRADENIA SURINAMENSIS** Rchb. fil. Wullschl. Mss.:

Labello trifido, laciniis lateralibus semiovatis, lacinia media porrecta cuneato lancea acuminata, carinis ternis approximatis per discum inter lacinias laterales, androclinii cucullo prono antice tantum aperto, lobulato, nullibi serrato.

Vaginae fultientes scariosae brunneo tinctae. Pseudobulbus ligulatus ultra pollicaris. Folium cuneato ligulatum acutum. Pedunculus ex vaginae fultientis supremae axilla internodio infimo crasso, reliquis tenuibus, vix bipollicaris, bivaginatus, apice subfractiflexus. Bracteae ligulatae acutae ovariis pedicellatis triplo breviores. Sepalum dorsale cuneato oblongum acutum fornicatum. Sepala lateralia oblonga acuta labello supposita. Tepala paulo minora, breviora. Labellum descriptum. Omnia sicca brunneo cinnamomea venis obscurioribus. Columna clavata. Para. Wullschlaegel.

4. **MACRADENIA LOXOGLOTTIS** Focke et Rchb. fil.:

Labello trifido, laciniis lateralibus semiovatis apice abruptis seu obtusangulis, lacinia antica a basi lata ligulata acuta obliqua, carina unica medio angulata per discum inter lacinias, androclinii cucullo erectiusculo serrulato, angulo (staminodio?) rotundato utrinque supposito.

Pseudobulbus ligulatus pollicem longus. Folium lanceolatum acutum. Pedunculus erectus, violaceus, paucisquamatus apice oliganthus racemosus. Sepala et tepala lancea acuta flava, serie macularum cinnamomearum contiguarum per lineam mediam. Labellum album, guttulis quibusdam ac carina purpureis. Columna alba, apice viridis, violacea limbata. Surinami. Paramaribo 2. Mart. 1843. (Hab. sp. sicca).

5. **MACRADENIA BRASAVOLAE** Rchb. fil. Huc: *Macradenia? Brasavolae* Rchb. fil. in v. Schl. Bot. Ztg. 1852. 751:

Perigonii hyalino-membranacei phyllis lanceolatis, acuminatis subaequalibus, labello trilobo, basi cuneato, lobis lateralibus rotundatis, abbreviatis, lobo medio cuspidato (Aulizei more!) elongato, androclinii alis marginantibus membranaceis denticulatis, processu rostellari lanceo.

Trugknollen schlank, länglich, zusammengedrückt. Blatt länglich, spitz. Aehre aus der Achsel der einen der grossen dürrhäutigen Schuppen, vielblüthig. Deckblätter häutig, lanzettlich, zugespitzt. Blüthen so gross, wie die der Macradenia triandra, nur die Spitzen viel länger ausgezogen. Ich fand je 2 Pollinia auf dem Androclinium, allein die Caudiculae waren abgefallen. Da ich diese Organe nicht studiren konnte, setze ich das Fragezeichen. — Guatemala.

1458. CRYPTARRHENA *RBr.*

Bot. Reg. t. 153. (1816.).

Rchb. fil. in v. Mohl und v. Schl. Bot. Ztg. 1852. 765:

Perigonii phylla quinque lanceolata subaequalia. Labellum ancipiti-unguiculatum, dorso angulate carinatum, antice in laminam quadrifidam divisum, basi cum gynostemio connatum sub angulo acuto. Gynoste-

*) Ingenti lapsu calami pro Ornithocephalo! Ornithorrhynchus prohum est animal mammiferum australasicum anatis rostro calcaribusque maris insigne.

mium semiteres, rostellum cucullatum, lanceum, antrorsum ascendens, androclinium postice ascendens, alato-marginatum, denticulatum. Anthera unilocularis, prona. Pollinia oblonga, excavatula, per paria lateralia (! ! !) in caudicula lineari basi glandulam oblongam, apice (in fundo androclinii) appendices geminas unguiculatas apice obtuse rhombeas gerente!! Epiphyta Vandea, vultu Notyliae, sed epseudobulbis. Racemi pluriflori axillares.

L. c. p. 766: Säule denen von Macradenia vergleichbar, Lippenanheftung und besonders Pollinarium einzig in ihrer Art, Lippenplatte der Lippe mancher Oberonien vergleichbar. — Die Gattung steht völlig isolirt, keine ist ihr auch nur verwandt. Hr. Prof. Lindley klagt mit vollem Recht über die Kürze und Unvollständigkeit der Originalbeschreibung, und hat bisher über die 1816 aufgestellte Gattung keine eigene Bemerkung veröffentlicht. Hr. A. Richard (ich besitze zum grössten Glück ein Exemplar von Galeottii!) hat vielleicht den unerhörten Bau des Pollinariums gesehen: „pollinia 4, per paria incumbentia, lamina anguste ascendens, glandula terminalis peltata." Die Gattung ist so wichtig, dass ich sie bald an einem andern Orte ausführlich beschreiben und abbilden werde: über die Lage der pollinia, ob collateralia, ob incumbentia, werde ich wohl noch mir klar werden bei Untersuchung mehrerer Blüthen.

Obs. Deceptus fui ill. Richardi verbis: „glandula terminali peltata." Non vidit appendices apicilares. Nam in icone inedita Tab. 24, cujus specimen possideo, pollinia bigemina apice depicta sunt. Nec erat credendum rem adeo difficilem indagare potuisse virum, in pollinariis indagendis adeo infaustum. Ceterum „glandula terminalis" A. Richardi est vulgaris glandula, uti altera pagina in „Rhynchadeniae" descriptione perspicere licet.

1. CRYPTARRHENA LUNATA RBr. l. c. Rchb. fil. l. c. 766:

Foliis oblongis apice attenuatis, inaequali-tridentatis, perigonii phyllis lateralibus internis apiculatis rhombeis, marginibus anticis crenulatis, labelli lamina quadriloba, lobis lateralibus ligulatis, apicem versus crenulatis, internis trapezoideis, antice tridentatis, gynostemio valido abbreviato, processu rostellari producto.

C. lunata R. Br. Bot. Reg. 11. 153. 1818. „Jamaica." Ad ic. citatam descripta.

2. CRYPTARRHENA KEGELII Rchb. fil. l. c. 766:

Foliis oblongo-cuneatis, apice inaequalibus, vulgo acuto-bilobis (Angraecorum more), perigonii phyllis ligulatis acutis integris, labelli lamina quadriloba, lobis externis semilunato-linearibus, medianis productis obtusatis denticulatis, seu falcatis integris, gynostemii gracilis rostello longo producto. Quarta in Surinam Kegel.

3. CRYPTARRHENA PALLIDIFLORA Rchb. fil. l. c. 766:

Foliis anguste lineari-lanceolatis, basi cuneatis, simpliciter acuminatis, perigonii phyllis lateralibus internis ligulatis obtusis apice denticulatis, labello prioris, lobis medianis tamen latioribus, brevioribus, gynostemii abbreviati validi rostello abbreviato, abscondito.

Clynhymenia A. Rich. Gal. Comptes rendus. *Orchidofunkia pallidiflora* A. Rich. et Gal.! Ann. sc. nat. 1845. p. 24. Oaxaca 5298. Galeottii

Huc: *Orchidofunkia* Rich. et Gal. (*Clynhymenia* Rich. et Gal. (Compt. rend.) Ann. sc. nat. 1845. p. 24:

Perianthium explanatum, labellum unguiculatum cum basi gynostemii continuum, ungue superius cristato-carinato, lamina plana trifida; gynostemium apice sensim dilatatum et in clinandrium marginatum postice productius desinens. Anthera 2-locularis, postice biloba, antice angustata et productior. Pollinia 4 per paria incumbentia, lamina an-

gusta ascendens. Glandula terminalis peltata. — Orchidofunkia pallidiflora Rich. Gal. tab. 24. Mexico.

1458½. PALUMBINA Rchb. fil.

Mss. in horto Schill.

Sepalum dorsale oblongum obtuse acutum. Sepalum inferius aequale. Tepala oblonga obtuse acuta. Labellum subaequale. Columna crassa, androclinium obliquum apiculatum, rostello quinquelobulo seu praerupto medio unilobulato; alae membranaceae retusae denticulatae juxta foveam circularem. Tabula stigmatica obliqua prona increscens super labelli basin. (Labellum igitur nec articulatum, nec vere continuum, sed accretum, uti in Dignathi, Comparettia, Scelochilo). Anthera depresse mitrata antice abrupte brevique triangula. Pollinia depresso pyriformia postice fissa, caudicula secundaria utrinque in fissuram ingrediente, caudiculae lineari accreta. Glandula rotunda.

1. PALUMBINA CANDIDA Rchb. fil. l. c. *Oncidium candidum* Lindl. Bot. Reg. XXIX. 1843. Misc. 76:

Pseudobulbis ovalibus compressis monophyllis, folio lineari-lanceolato basi canaliculato, racemo paucifloro flexuoso, sepalis oblongis lateralibus connatis, petalis majoribus patentibus planis obtusis, labello ovato oblongo plano basi linea convexa elevata transversa aucto, columnae alis rotundatis, serratis, tuberculo baseos elevato labello adnato.

Guatemala, Hartweg.

Ivory white flowers with a couple of small violet dots at the base of each petal, and the usual prominence at the base of the column, bright yellow and adnate to the lip. The flowers are 1" diam.

Lindl. Folia. I. Oncidium 53: O?? candidum Lindl. Bot. Reg. 1843. l. c.: „all the evidence I possess regarding this consists in a sketch from the live plant, made in 1843. Specimens have been lost, and the growing individual has disappeared. The flowers are about an inch in diameter, white, with a yellow crest and are described as having appeared in a fewflowered raceme. To what was said in the „B. R." the following should be added: sepalum dorsale oblongo lineare, erectum; lateralia in unum breve concavum emarginatum connata. Petala ovata obtusa, sepalis multo majora. Labellum patens ovatum, obtusum, etiam majus, basi columnae per tuberculum adnatum, quod a fronte marginulo denticulato transverso circumdatur. Columna brevis, stigmate circulari, alis cuneatis brevibus denticulatis. Pollinia 4, *geminata caudiculis 2 cuneatis glandulae circulari adnata!* If the sketch before me is accurate, it cannot be an Oncidium, as the words in italics show; but until the plant shall have been reexamined it is safest to leave it where it stands.

Rchb. fil. Mss.: Rhizoma validiusculum multisquamatum. Pseudobulbi ligulati ancipites, sulcati, monophylli (ex cicatricibus etiam diphylli). Folium cuneato ligulatum acutum, obscure viride. Pedunculus atropurpureus paucivaginatus apice racemosus, vulgo quadriflorus. Bracteae squamiformes minutae. Ovaria pedicellata viridia, sepala et tepala extus roseo violacea. Omnia intus candida, exceptae sunt striae roseoviolaceae croceae maculis atropurpureis. Magnitudo florum nunc illorum Odontoglossi pulchelli, nunc major.

1460. ONCIDIUM Sw.

Act. Holm. 1800. 239.

Huc: *Brassia* R. Br. Kew. ed. 2. V. 215, *Miltonia* Lindl. Bot. Reg. XXIII. 1837. 1916. *Macrochilus* Knw. Westc. Fl. Cab. t. I. 45, *Leochilus* Knw. Westc. Flor. Cab. II. 143. *Erycina* Lindl. Folia I. *Solenidium* Orch. Lind. p. 15.

Aurea monographia ill. Lindley in Foliis Orch. I. Oct. 17. 1846 edita, quam sequimur. Et haec habet auctor noster:

For the distinction between this well-known genus and Odontoglossum, the reader is referred to that article.

In some of the sections, whether artificial or natural, into which Oncidium is here divided, the limits of the species are clearly definable; in others it is extremely doubtful, whether some, which the author still retains ought to be admitted as anything more than forms of one common type, as for example, among the Pluritubercúlata. It will also be found, that supposed species are absolutely reduced without hesitation to an extent, which the author once thought improbable; but many months' very careful critical re-examination of all the copious materials at his command leaves no doubt upon his mind, that at least those supposed species, which are now cancelled ought never to have been elevated to that rank; he must, however, add, that the badness of materials, the imperfection of drawings and descriptions, and the misinformation so common in gardens concerning countries, have rendered such errors unavoidable, even if no account is taken of the haste with which a botanist working without leisure must necessarily act.

He would add, that in the revision of this genus his thanks are not only due to his usual correspondents, but most especially to Professor H. G. Reichenbach jun. of Leipsig, a most acute and experienced orchidologist, without whose invaluable assistance it would have been impossible to form an opinion concerning many species published by continental writers; he has also to acknowledge his special obligations to the Administration of the Museum of Natural History, Paris; to Messrs. Linden and Galeotti; to Mr. Miers; and to Sir W. J. Hooker; all whose materials have been placed in his hands without reserve.

Analysis of the sections.

Labellum nanum coriaceum (Cyrtochilum H. B. K.)	§. 1. *Microchila*. 1—25.
Labellum dilatatum membranaceum. Clinandrium margine nudum.	
Folia equitantia	§. 2. *Equitantia*. 26—38.
„ teretia	§. 3. *Teretifolia*. 39—43.
„ plana.	
Sepala lateralia connata	*Tetrapetala*.
Labellum margine barbatum	§. 4. *Barbata*. 44—49.
„ „ laeve.	
Petala multo majora	§. 5. *Macropetala*. 50—64.
„ subaequalia	§. 6. *Micropetala*. 65—82.
Sepala lateralia libera	*Pentapetala*.
Petala multo majora	§. 7. *Macropetala*. 83—99.
Petala subaequalia.	
Labellum indivisum v. apice tantum lobatum v. basi utrinque unidentatum.	§. 8. *Integrilabia*. 100—116.
Labellum auriculatum panduratum basi angustius, v. lobo terminali aequali.	
crista pulvinata s. villosa	§. 9. *Pulvinata*. 117—120.
„ tuberculata.	
tuberculis 2—4	§. 10. *Paucituberculata*. 121—125.

tuberculis 3—00 . . . . §. 11. *Pluritubercula* 126—179.
" " 2—00, adjectis verrucis circumstantibus. } §. 12. *Verrucituberculata*. 180—185.
basi manifeste latius . . . . §. 13. *Basilata* 186—196.
Labellum dilatatum membranaceum. Clinandrium lacerum vel glandulosum . . . . §. 14. *Glanduligera*. 197—198.

From this arrangement, the most important part of which was first proposed in „Paxton's Flower Garden," vol. i. t. 6, although certainly very artificial, there seems no good reason for departing, until much more has been learned of the genus by minute and exact examination of living specimens. Hereafter, the condition of the column and the rostellum may have more importance attached to them.

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§. 1. Microchila.

Analysis of the species.

A. Sepalis auriculatis. (Auriculata.)

Labellum sagittatum.
laciniis lateralibus lanceolatis, lamellis cristae integris . . . . 1. *macranthum*.
" " " lamellis cristae laceris . . . . . 2. *cordatum*.
" " acinaciformibus intermedia medio dente magno acinaciformi aucta . . . . 3. *hastiferum*.
Labellum hastatum.
Columnae alis dolabrif. apice recurvis lacinulis 2 porrectis membranaceis adjectis . . . . 4. *trifurcatum*.
" " horizontalibus setaceis . . . . 5. *trilingue*.
" " cuneatis . . . . 6. *serratum*.
" " acinaciformibus erectis crista triplici adnata verrucis plurimis acutis a fronte . . . . . . 7. *falcipetalum*.
Labellum basi rotundatum vel angulatum.
lineare canaliculatum.
sepalis petalisque orbicularibus . . . . 8. *aemulum*.
" lateralibus petalisque ovatis
cristae dente unico magno crenato . . . . 9. *superbiens*.
" " valido tuberculis denticulisque utrinque . . . . 10. *halteratum*.
obovatum . . . . 11. *diceratum*.

B. Sepalis nudis (Exaurita).

Labellum trullaeforme apice elongatum
basi rotundatum
alae minutae acutae triangulares . . . . 12. *ventilabrum*.
" " ligulatae pendulae denticulatae . . . . 13. *refractum*.
" " ovatae cuspidatae lacerae . . . . 14. *mandibulare*.
basi acutangulum.
crista depressa gyrosa . . . . 15. *undulatum*.
" oblonga 5-loba 4-sulcata denticulis 5 a fronte verrucisque quibusdam utrinque . . . . 16. *zebrinum*.
" carinata.

carina media erecta acuta, 2 laterales pronae adnatae denticulis
2 a fronte verrucisque pluribus utrinque; alae retusae . . . 17. *orgyale.*
carinae paucae erectae acutae verrucis paucis sinuosis utrinque;
alae triangulares . . . . 18. *tenense.*
Labellum panduratum
integrum, columna aptera . . . . 19. *corynephorum.*
retusum, laciniis lateralibus parvis triangularibus; columna basi
utrinque auriculata . . . . 20. *loxense.*
Labellum rotundum aut équilateri-triangulare convexum.

(Cimicifera.)

oblatum trilobum . . . . 21. *microchilum.*
circulare.
sepalis lateralibus linearibus elongatis . . . . 22. *cimiciferum.*
sepalis omnibus ovatis . . . . 23. *cocciferum.*
triangulare.
alis col. obsoletis . . . . 24. *trulla.*
alis col. acuminatis . . . . 25. *examinans.*

A. Auriculata.

All the species of this section have very large flowers, the prevailing tint of which is cinnamon-brown with or without a mixture of yellow. Their panicles are usually straggling or twining, sometimes reaching to a great length. Scarcely any are in cultivation, though most of them have been sent home by either Warscewicz, or Hartweg, or Mr. Linden's collectors. The tough leathery lip is an essential characteristic.

1. ONCIDIUM MACRANTHUM L. O. 205. L. F. L c. Nr. 1. p. 4:

A magnificent species, with a climbing panicle. Flowers three inches in diameter. Sepals purplish brown, petals yellow. Lip purple, with a white crest, consisting of a central keel, with two acute reversed teeth on either side.

Wild in Central-Amerika, common; Guayaquil hb. Lambert; Peru — Mathews, 1919; at the foot of Tunguragua, 11,000 ft. above the sea — Hartweg; descent from Alausi to Jaquachi, at 7000 ft. — Jamieson, in hb. Hooker.

Lindl. in Paxt. Fl. Gard. III. 126:

Pseudobulbis ovatis, foliis oblongis obtusis, racemo volubili, sepalis cordatis oblongis obtusis undulatis unguiculatis, petalis aequalibus conformibus paulo latioribus et brevius unguiculatis, labelli hastati laciniis lateralibus subfalcatis intermediae acuminatae aequalibus, crista 3 lamellata, lamellis apice confluentibus utrinque dentibus truncatis, columnae alis rotundatis. Guayaquil.

Flowers 3—4 inches across. Sepals purplish brown, tipped with yellow. Petals bright yellow. Lip purple, with a white crest.

2. ONCIDIUM CORDATUM L. F. L c. sub N. 2. L. Sert. l. c. p. 4:

Pseudobulbis —, foliis oblongo lanceolatis acutis coriaceis basi angustatis, scapo paniculato ramosissimo, bracteis oblongis cucullatis membranaceis obtusis, sepalis unguiculatis ovatis undulatis, petalis unguiculatis cordatis margine crispis denticulatis, labelli hastati unguiculati lobis angustis acuminatis appendicibus disci petaloideis, columna subaptera.

Peruviae rupes ad ripas fluminis prope Pangoa. Mathews 1062.

Paxt. Fl. G. II. 26: A fine species, with brown flowers, whose segments appear to be bordered with yellow.

3. ONCIDIUM HASTIFERUM Rchb. fil. in Bonpl. Ap. 15, 1854. L. l. c. sub 3. p. 4:

O. labelli laciniis lateralibus acinaciformibus denticulatis, intermedia lanceolata acuminata, cristae dente valido acinaciformi lamella utrinque prostrata introrsa, c. alis ligulatis obliquis.

Wild in Peru, near Loxa—Warscewicz.

Near O. macranthum. Upper sepal ovate, wavy; laterals longer, wedgeshaped, oblong obtuse. Petals ovate, blunt, somewhat cordate, with very short broad claws. — Rchb. fil. I have a sketch of this from the author, which shows it to be distinct from all the others here enumerated. A great fleshy hooked carina rises from the middle of the lower lobe of the lip.

Rchb. fil. v. Warscewicz Bonpl. II. 102:

Aff. macrantho tepalis subsessilibus, labelli laciniis lateralibus lato acinaciformibus brevioribus, dente in basi laciniae mediae ancipiti acinaciformi per carinam in gynostemium abeunte, addita utrinque lamella introrsa prostrata in laciniis lateralibus, gynostemii alis ligulatis obliquis.

Sepalum summum ovatum, undulatum; unguis vix quintam longus, dimidio inferiori utrinque auriculatus, sepala lateralia paulo longius unguiculata, ipsa longiora, cuneato oblonga obtusa, paulo angustiora, basi extrorsa minute auriculata, tepala brevissima ac late unguiculata ovata obtusata basi subcordata, divaricata, labellum trifidum, laciniae laterales lato acinaciformes, latere postico extrorsum semilunato minute sinuato dentato, latere antico subrecto, lacinia media sinubus triangulis prope rectis separata a basi semiovata lancea acuminata, dens validus lato acinaciformis carinaeformis in media basi laciniae mediae, addita utrinque basin anticam versus lamellula ligulata parallela basi adnata, carinula a dorso hujus dentis usque ad pedem gynostemii; lamellae prostratae, introrsum semiovatae, infra (basin externam praeter) liberae projectae in laciniis basilaribus, facie sua carinulam longitudinalem spectantes; adjecta utrinque falcula in basis laciniae mediae margine extremo; gynostemio humili acuto alis ligulatis obliquis. Loxa mit Hofmeisterella, Centropetalum, Telipogon, Trichoceros platyceros u. s. w. Plan gerade wie bei Onc. macranthum, nur in allen Punkten wesentlich verschieden. v. Warscewicz.

4. ONCIDIUM TRIFURCATUM Lindl. Ann. Nat. Hist. XXV. 384. n. 4. p. 4:

Flowers large, with yellow on the edges of the petals. Lat. sepals twice as large as dorsal. Crest consisting of three fleshy truncate ribs, of which two lie over the third. The two wings of the column are fleshy and scymetarshaped, with a pair of lancet shaped appendages projecting below them. Near O. serratum.

Wild in Peru—Hartweg.

Lindl. Ann. N. H. l. c.:

Sepalis lateralibus unguiculatis spathulato-obovatis planis, dorsali unguiculato rotundato crispo duplo breviore, petalis crispis dorsali minoribus, labello unguiculato tripartito, laciniis linearibus truncatis lateralibus canaliculatis crista trilamellata, columna tetraptera alis superioribus linearibus carnosis apice abrupte recurvis, inferioribus rotundatis tenuioribus, clinandrii dorso in dente antherifero producto, rostello membranaceo bifido.

Peru (Hartweg).

I have only seen 3 flowers. They are 3 inches in diam.; the lateral sepals are wholecoloured, the dorsal and the petals are bordered with yellow(?). Near O. serratum.

5. ONCIDIUM TRILINGUE Lindl. Paxt. Fl. G. I. Nr. 63. II. t. 63. et l. c. sub 5. p. 4:

A large inelegant scrambling plant. Flowers cinnamon-brown, very crisp. Crest of three dagger-shaped blades, with a few callosities in addition.

Wild in Peru; at the sources of the Marannon—Warscewicz.

Lindl. Paxt. Fl. G. cf. Walp. Ann. III. 554. addendis:

Of the crest the structure is so singular and complicated, that it is difficult to describe. In this however it is remarkable that in front of a large quasi-rock elevation there project three flat yellow tongues, which are quite peculiar. — Lem. Jard. Fl. III. 217.

6. ONCIDIUM SERRATUM Lindl. Sert. l. c. et F. l. c. p. 5:

Flowers very crisp, lower sepals included, cinnamon-brown, with the upper half of the petals yellow. The crest consists of six parallel carinae, placed alternately ²/₃ close together. Column-wings wedge-shaped, toothletted. It has flowered in M. Pescatore's rich collection.

Wild in Peru—Mathews.

Sert. l. c.:

Pseudobulbis ovalibus diphyllis, foliis erectis rigidis acutis basi angustatis, canaliculatis, panicula pauciflora brevioribus, sepalis serratocrispatis, dorsali reniformi, lateralibus multo longioribus obovatis patentissimis, petalis ovatis acutis serrato-crispatis conniventibus, labello multo minore hastato, laciniis acutis intermedia lineari obtusa media constricta lateralibus acuminatis triplo minoribus (crista depressa crenulata), columnae alis subulatis ascendentibus. — Peru.

Found by Ruiz and Pavon, among whose drawings at Lima it was found and copied by Mr. Matthews, who sent the fig. to Sir W. Hooker. Flowers are represented of a cinnamon brown, with the tips of the petals yellow. Lateral sepals more than an inch and ³/₄ long; the petals mesure an inch and quarter, dorsal sepals nearly 1¹/₂ across. — Lindl. Paxt. Fl. G. l. c.: Flowered with Pescatore. Pseudobulbs oblong, smooth, terete, each having two broad sword shaped leaves at the point, and several others below the pseudobulb. Flowerstem nine feet long, partly twining, with 5 or six lateral branches, each carrying 4—6 flowers, near the extrem. Annexed fig. twice as large as in the spec. fig. in Sir Williams Herb., and 4 times as in Pescatores collection. Cinnamon brown with bright yellow in Peruv., in the fresh plant colours of Oncidium luridum.

7. ONCIDIUM FALCIPETALUM Lindl. Orch. Linden Nr. 76. F. l. c. p. 5:

A very fine species, with a scrambling panicle twenty feet long. Flowers more than three inches in diameter, brown. The angular base of the lip, and a cluster of sharp tubercles in front of the main ridge of the crest clearly distinguish this; the former are smaller and more numerous in Fünck's Venezuela specimen in Sir W. Hooker's herbarium, than in Linden's in my possession.

Wild in Venezuela. Fünck in hb. Hooker; forests of Merida, at the height of 5—6000 ft. — Linden, 626: Caracas at 6000 ft. — Wagener.

Lindl. Orch. Lind. p. 14:

Foliis lanceolatis acutis pergameneis 2—9 nerviis, floribus dense paniculatis, bracteis cymbiformibus obtusis, sepalis breve unguiculatis supremo subrotundo cordato, lateralibus ovato oblongis obtusis, petalis sessilibus brevioribus oblongis crispis complicatis falcatim recurvis, labello carnoso hastato acutissimo basi utrinque corrugato et lamellis dentatis aucto, columna laevi, alis parvis semiovatis unidentatis, clinandrio postice mucronato pubescente.

„Both epiph. and terr. from the forests of Merida at the height of 5000—6000 feet. Aug. Pseudobulbs oval, compressed, two or three inches long. Stem twenty feet

long. scrambling. Flowers very large, brown. N. 626. A noble species with flowers more than 3 inches in diameter. Leaves eighteen inches long, 1½ wide.

Rchb. fil. in Bonpl. II. 12: Die ganze Blüthe rothbraun, Tepala und oberes Sepalum gelb berandet, Lippenwulst eben so. Scharfgepresste Exemplare Linden's sehen verschieden aus, ohne einen wesentlichen Anhalt zur Unterscheidung zu bieten. Die Grösse der Deckblätter weicht etwas ab. Caracas. 6000'. Wagener.

Rchb. fil. Bonpl. II. 279. Blüthen braun. Tepala mit Goldgelb eingefasst; aneinander sich legend bilden dieselben einen Ring. 7000'. Ocanna. Juli. Nr. 31. Schlim.

7 bis. ONCIDIUM PAVONII. Rchb. fil. Wswz. Lindl. Folia l. c. N. 7 bis p. 5:

Of whose lip and column I am favoured with a sketch by the learned author, appears to be a variety of this. A fragment from Pavon exists in Boissier's herbarium.

8. ONCIDIUM AEMULUM Rchb. fil. in Bonpl. Ap. 15, 1854. Lindl. l. c. sub 8. p. 5:

A noble species, with dense cinnamon-brown flowers two inches and a half in diameter, arranged upon a climbing panicle, which reaches to the top of trees twenty-five or thirty feet high.—Schlim. When dried it looks like O. macranthum, but is quite different in the lip, which is dilated and angularly rounded at the base, linear channelled in the middle lobe, with a downy convex crest, crenated in front and arching over several small round warts. One of the leaves in Schlim's specimen is almost two feet long.

Wild in Peru—Warczewicz. New-Granada in the province of Ocanna at 7500 feet. —Schlim. 413; near la Baja in Pamplona, at 10,000 ft.—Schlim, 1198. (fide Rchb.).

Rchb. fil. v. Warscewz. Bonpl. II. 102:

Aff. O. superbienti labello ligulato lineari basi utrinque angulato, carina basilari tricarinulata velutina, additis carinulis, gynostemii alis falcatis ascendentibus.

Paniculae rami elongati, robusti, —4flori, internodia bipollicaria, bracteae chartaceae ovatae acutiusculae cymbiformes, ovaria pedicellata dimidio aequantes, sepala anguste unguiculata, sepalum dorsale ab ungue trilineari basi utrinque minute lobulato cordiforme angulis obtusatis, paulo longius quam latius, margine valde crispulum, sepala lateralia paulo longius et latius unguiculata, basi praesertim externa minute lobulata, lamina illi subaequalis, minus crispa; tepala brevius (1½ lin.) ac latius unguiculata, lamina oblonga acutiuscula seu acuta a basi hastata obtusangula crispa, labellum ligulato lineare acutum, basi utrinque anguste semirotundo ligulato semiovatove lobulatum, carina velutina tricarinulata a gynostemii basi usque in basin lobi medii ascendente, ibi praerupte nasuto decisa antice lateribusque pluriverruculosa, carinulae extrorsae a centro in limbum anticum loborum lateralium. Gynostemium abbreviatum incurvum, postice apice triangulo ascendens, dorso glaberrimum, basis infrastigmatica paulisper protrusa, alae juxta mediam foveam assurgenti falcatae parvae nunc denticulatae. Fast eben so gross als das herrliche Oncidium macranthum. Oncidium halteratum hat sitzende Tepala; O. superbiens ist durch die lang ausgezogene dreieckige Lippe mit 2 Seitenzähnchen ohne alle Lappung gleich zu unterscheiden; ausserdem kennen wir kein beschriebenes Oncidium dieser Abtheilung mit ähnlichen Flügelchen. v. Warscewicz.

Rchb. fil. Bonpl. II. 278. Ocanna. 8—10000'. Januar 413.—Pamplona: La Baia. Nr. 1198. Schlim.

Rchb. fil. Bonpl. III. 66. Ocanna. 6000'. Wagener.

9. ONCIDIUM SUPERBIENS Rchb. fil. in Linnaea XXII. 843. L. F. p. 7:

Much like O. halteratum, to which I refer Schlim's 887 as it stands in my own herbarium, although Mr. Reichenbach's specimens having the same number belong to this. It differs in having the petals very much sinuated, with the upper half yellow, and the lower banded with the same colour. The crest of the lip consists of one

large blunt lobed tooth, with a wavy line on each side. The flowers appear to be deep chocolate-red, and to belong to a large showy panicle.

Wild in New-Granada—Purdie in hb. Hooker; in the province of Ocanna, at 8—9000 ft.—Schlim (fide Rchb.); Venezuela—Fünck and Schlim, 1433.

Cf. Walp. Ann. III. p. 554. Rchb. fil. Bonpl. II. 279. Ocanna: Paramos. 8—9000'. Januar. Nr. 887. Schlim.

Rchb. fil. Bonpl. III. 66. Ocanna. Wagener.

10. ONCIDIUM HALTERATUM Lindl. Orch. Linden, N. 75. Paxt. l. c. Rchb. fil. in Bpl. March 1855. F. l. c. p. 6:

(A) *luteum*. Flowers yellow. Middle tooth of crest strong, prominent.

(B) *fuscum*. Flowers brown, with a yellow border to the petals, and lip. Middle tooth of crest short, rounded.

This differs from O. falcipetalum in the base of the lip being round, not angular, and in the crest consisting of one strong blunt tooth, with an uncertain number of others placed at its sides, but not in front. These are more numerous in the brown variety, than in the yellow; the former Mr. Reichenbach refers to O. falcipetalum (Orch. Schlim.), but the plant I possess from Mr. Linden numbered 31 is certainly this species. O. halteratum and falcipetalum are much alike, and very fine though not showy plants, with great climbing panicles of flowers three inches across. The petals are almost sessile.

Wild in New-Granada; A. in the forests of Quindiu at the height of 7800 feet. — Linden 1289; B. in the prov. of Ocanna, at the height of 7500 feet. — Schlim, 31 and 387: Warscewicz.

Rchb. fil. Bonpl. III. 66. Die nächst beschriebene Pflanze stimmt fast mit der Originalbeschreibung. — Pedunculus volubilis infra paniculatus brachycladus superne racemosus. Bracteae cymbiformes ovaria pedicellata dimidio aequantes. Sepalum summum unguiculatum cordatum obtusum undulatum basi utrinque minute quadrato auriculatum. Sepala lateralia longius unguiculata triangulo obtusata. Tepala a basi anguste ligulata brevi obtusangula triangula undulata. Labellum ligulatum angustum basi utrinque angulatum. Carina anguste rhombea lateribus lobulata ante angulos in medio, dein utrinque in basi. Gynostemium gracilentum postice angulatum in vertice; dentes erecti falcati appressi in latere; camera parvula (pro glandula ?) sub rostello; fovea ovata; pars infrastigmatica utrinque obtusangula.— Hüllblätter schön kastanienbraun. Tepala auf vordrer Hälfte hellgelb (im trocknen Zustande). Ocanna. Wagener.

Lindl. O. Lind. p. 14. 1846:

Foliis ensiformibus tenuibus acutis, racemis laxis longissimis, bracteis cymbiformibus obtusis, sepalis longo unguiculatis supremo cordato subrotundo, lateralibus ovatis obtusis, petalis sessilibus ovatis undulatis obtusis brevioribus, labello carnoso lanceolato acuto subtus carinato supra crista elevata etiam carinata pubescente aucto basi utrinque dentato; columna dorso sub apice glanduloso alis linearibus retrorsum falcatis.

„Epiph. from the forests of Quindiu, in the province of Mariquita, at the height of 7800 feet. Febr. Flowers deep yellow (N. 1289.). A very fine species allied to O. undulatum and flexuosum. Flowers more, than 2 inches across. Leaves thin, scarcely an inch broad.

11. ONCIDIUM DICERATUM Lindl. l. c. sub 11. pag. 6:

O. panicula volubili, sepalis petalisque subconformibus ovatis, labello obcordato basi dilatato rotundato, cristae callis 4 parallelis (ꝏ) adjectis verruculis quibusdam utrinque a fronte, columnae alis brevibus carnosis cornutis.

None of the Auriculate Microchiles except this has an obcordate lip. The flowers are smaller than any in its section, not two inches across, apparently dark brown,

with the tip of the lip yellow. Dr. Jamieson remarks, that he has not distributed it, from which it seems to be a rare plant.

Wild in Peru; in woods near Pasto, at 10.000 feet. — Jamieson.

B. Exaurita l. c. p. 6.

There are no very large-flowered species in this group, which approaches Odontoglossum nearly in O. cimiciferum, etc. The leathery lip remains characteristic, for which reason I doubt, whether O. scansor can belong here.

12. ONCIDIUM VENTILABRUM Rchb. fil. et Warscewz. Bonpl. Ap. 15. 1854! Lindl. l. c. p. 6:

This plant is very much like O. orgyale, and the figure of O. undulatum in „HBK.": but I think they are rightly distinguished by Rchb., who has pointed out the peculiarities of the crest. In this species it consists of five erect keels, of which three are parallel, and in front of two which diverge almost at a right angle, in addition to which there are several lateral tubercles. The colours of the flower are also different. According to Warscewicz, O. orgyale has whole-coloured flowers with brown sepals and deep violet lip, but O. ventilabrum has cinnamon-brown sepals and petals, with the upper half of the latter yellow, and a deep rose-coloured lip yellow at the base.

Wild in Peru. Warscewicz.

Rchb. fil. v. Wswz. Bonpl. II. 101:

Aff. O. undulato Lindl. sepalis lateralibus latioribus, labelli carinis primariis tribus in basi, lateralibus divergentibus, gynostemii auriculis minutis infrastigmaticis.

Paniculae ramuli subtenues (sc. tenuiores ac in O. macranthe etc., validiores, quam in O. zebrino), parte inferiori 1—5 vaginati, vaginae acutiusculae, ramuli superne florigeri, bracteae ovatae acutae ovarii pedicellati tertiam aequantes, sepala ovata apiculata vix margine plana (ex sicco), brevius unguiculata, ungue tertiam vel dimidiam laminae aequante, basi exauriculato, lamina sepali terminalis paulo brevior, quam illae sepalorum lateralium, basi supraunguiculari nunc cordata, tepala ovata acuta, late ac brevissime (vix lineam longe) unguiculata, margine undulata, paulo breviora quam sepalum dorsale, labellum ligulatum acutum, basi utrinque integro seu bilobulo lobatum, carina anceps prona in disco, addita utrinque carinula minor aeque anceps, duaeque divergentes postice circumstantes, plurimae verruculae crassae rotundae, gynostemium cum ungue labelli connatum (more O. refracti Rchb. fil.), basi tenue, apice dilatatum, lobuli 2 minutissimi subtrianguli deflexi in margine inferiore foveae stigmaticae. Blüthen so gross, wie bei O. falcipetalum Lindl. Oehrchen unter der Narbe sind noch bei keiner Art dieser Abtheilung angegeben, sie kommen jedoch vor bei *O. undulatum* Lindl. (*Cyrtochilum undulatum* Hb. B. Kth.). Wir sind fest überzeugt, dass beide Arten gut unterschieden sind, Merkmale aber sind schwer beizubringen. Zunächst hat unsere Art zweimal so grosse Blüthen, die seitlichen Sepala breiter, das obere länger. Der mit dem Fuss der Säule verwachsene Lippennagel ist viel länger; die Zipfelchen stehen nach unten, bei O. undulatum mehr nach vorn; endlich ist die Anordnung der Lippenschwielen eine sehr verschiedene, die hintenstehenden divergirenden Leisten des O. ventilabrum fehlen dem O. undulatum gänzlich. Neu-Granada. v. Warscewicz.

13. ONCIDIUM REFRACTUM Rchb. fil. Bpl. Ap. I. 1854. L. F. l. c. p. 7:

I cannot find this among Purdie's plants; but I have some flowers from Professor Reichenbach. It appears to be a distinct species, having spathaceous bracts, a loose pyramidal panicle, and undulated sepals and petals convolute at the point; reddish brown, with red bands in a dried state. The column is abruptly bent back, and united to the lip by a quarter of its length. The lip is bluntly lozenge-shaped at the base, and is extended into a strap as long as the sepals; the crest consists of an elevated keel, with depressed lamellae crenulated at the edge, two near the base

resting by their points on broader ones in front. Column slender, with minute ligulate wings, lacerated at the drooping points, and placed on the lower edge of the stigma. In the single flower I examined I only found a pair of thick deep wrinkled lamellae in the middle of the lip, which is very fleshy and convex except at the edge. The lozenge-form only appears upon flattening the base.

Wild in New-Granada. Purdie (Rchb.)

O. (C.) refractum Rchb. fil. in Bonpl. II. 12:

Pseudobulbo oblongo parvo diphyllo, foliis oblongo lanceolatis acutis, panicula pyramidali diffusa, ramis ascendentibus 4—6 floris, bracteis spathaceis paleaceis acutis ovaria pedicellata tertia parte aequantibus, sepalis tepalisque undulatis, apice convolutis, sepalo summo oblongo acuto latius unguiculato, sepalis lateralibus subaequalibus, sed basi unguiculata connatis, tepalis subaequalibus quarta parte brevioribus latius unguiculatis, labello a basi obtuse rhombeo in ligulam acutam producto sepalis aequilongo, carina elevata apice libera acuta a basi ad medium, lamellis depressis extrorsum crenulatis, duabus pone basin in alteras anteriores latiores apice suo incumbentibus, gynostemio gracili tertio infimo cum labello connato, dein refracto, parte stigmatica ovali postice acuta, alis minutis ligulatis apice pendulo retuso laceris in margine inferiori portionis stigmaticae dilatatae.

Trockene Blüthen hellbraun mit rothen Querbinden. Ich weiss nicht, dass irgend eine Art dieser Abtheilung eine so merkwürdige Verbindung der Säule und Lippe habe. Angebahnt ist sie bei mehren Cyrtochila und Basilata, indem eine wulstige Vermittlung zwischen Lippe und Säule Statt hat, und ich betrachte diess Moment als Fingerzeig, dass ich es mit einem Cyrtochilum und keinem Odontoglossum zu thun habe. Neu-Granada. Purdie.

Rchb. fil. Bonpl. III. 66. Ocanna. Wagener.

Huc: *Odontoglossum divaricatum* Lindl. O. Lind. Nr. 89. p. Lindl. F. I. *Odontoglossum* Nr. 29. p. 11:

O. foliis oblongis coriaceis obtusis basi angustatis nitidis, panicula maxima laxa divaricata volubili, floribus (parvis) distantibus vix internodiis aequalibus, sepalis petalisque unguiculatis lineari-lanceolatis acuminatis undulatis, labello rotundato dilatato in cuspidem longum angustato basi lamellis 3 undulatis brevissimis aucto alteraque utrinque arcuata elongata, columnae alis brevibus acuminatis recurvis.

Its broad shining leaves and long straggling panicles of small flowers distinctly point out this species, which is far from a handsome one. Pseudobulbs ovate, acute, compressed at the sides. Petals yellow, spotted with brown.

Wild in Venezuela; in the province of Merida, at the height of 9000 feet; August. Linden 683.

14. ONCIDIUM MANDIBULARE Lind. Rchb. fil. Bonpl. Dec. 1, 1854 Lindl. F. I. c. N. 14:

A very large plant. Flowers half as large, as in Oncidium falcipetalum, brown and yellow. Rchb. describes the lip, etc., thus: „labello basi ovato convexo apice in ligulam longam producto, carina antice rostrata, bisulcata in disco, utrinque tuberculata, linea lunata carinata sulcis transversis quodammodo polyodonta (sed retusa — dentium incisivorum hominis instar) utrinque extrorsa ante marginem, gynostemio basi alte cum labello connato, dein refracto alis ovatis cuspidatis laceris parvis deflexis in inferiori limbo foveae transversae.“ A sketch with which Prof. Rchb. has favoured me corresponds with this. The lateral sepals are represented as linear-lanceolate, very wavy, and connate at the base; which separates the plant from any form of O. balteratum.

Wild in Neu-Granada. Pamplona, Pedro Alonzo, at 6000 feet. January. 1849. — Schlim, 1179. (Rchb.)

Rchb. fil. Bonpl. II. 279:

Aff. O. refracto sepalis lateralibus lanceolatis acutis undulatis unguibus brevibus basi connatis, labello basi ovato convexo apice in ligulam longam producto, carina anticè rostrata, bisulcata in disco utrinque tuberculata, linea lunata carinata sulcis transversis quodammodo polyodonta (sed retusa — dentium incisivorum hominis instar) utrinque extrorsa ante marginem, gynostemio basi alte cum labello connato, dein refracto, alis ovatis cuspidatis laceris parvis deflexis in inferiori limbo foveae transversae.

Adest ramus inflorescentiae volubilis forsan ingentis uti concludendum ex axeos frustulo calamum cycneum crasso. Ramus paulo flexuosus. Bracteae cymbiformes acutae ovaria pedicellata dimidio aequantes. Sepala in basi unguiculata oblongo lanceolata crispa. Tepala basi subcordata, latiora, breviora, acuta. — Blüthen halb so gross, als die des Oncidium falcipetalum, braun, gelb eingefasst. Pamplona: Pedro Alonzo. 8000'. Januar. 1849. Nr. 1179. Schlim.

15. ONCIDIUM UNDULATUM Lindl. Sert. Orch. sub t. 48. Rchb. fil. in Bonpl., May 1, 1854: *Cyrtochilum undulatum* HBK., I. t. 84. L.O., p. 210. L. F. 7.

This is still unknown to me. It is said to have brown flowers spotted with white and yellow; a lip pink outside, yellow within, variegated with red and white spots; scape as high as a man, according to Kunth. It is near O. orgyale and ventilabrum. Mr. Reichenbach who has examined an authentic specimen, thus describes the lip the form of which is imaginary in Turpins figure. Cf. infra.

Wild in Neu-Granada; near the villages of La Ascension and *Paramo de los Papas*, at 6270 feet. — *H. B.*

Rchb. fil. Bonpl. II. 108. Flores illis O. corynephori subaequales. Sepalum dorsale ellipticum apiculatum tertia infima anguste ac abrupte unguiculatum, ungue excurvi, sepala lateralia aeque unguiculata, laminis obtusangule triangulis, tepala brevissime lateque unguiculata, triangula, basi obtusata utrinque semicordata, labellum triangulé ligulatum, anguli in ima basi acutiusculi, carina depressa gyrosa per tertiam infimam, addita utrinque pone angulum carina gyrosa ante medium extrorse acuta gynostemium humile recurvum, fovea dilatata limbo producto, alis angustis lineari-triangulis minutis obliquis utrinque in ima basi. Gynostemium basi sua cum ungue labelli connatum, hinc a laminae labelli basi erectum.

16. ONCIDIUM ZEBRINUM Rchb. fil. in Bonpl., Ap. 1, 1854. Lindl. F. sub 16. p. 7: *Odont. zebrinum* Linn. 1849. (cf. Walp. Ann. III. 559.)

Undoubtedly this is an Oncidium, as Rchb. has now pointed out. Since the article Odontoglossum was written, I have received it from the collections of Moritz, and find it to be a plant with a straggling, twining panicle of flowers resembling those of O. trilingue (N. 5.), but smaller. Its long lip acutely angular at the base, and its crest are characteristic; the latter consists of a central ridge formed of five long confluent lamellae with as many sharp teeth in front and several straggling warts on either side.

Wild in Caracas. Moritz. — L. F. Odont. p. 14.

Rchb. fil. l. c. Bonpl. II. 12: Oncidium zebrinum. Caracas. Wagener.

17. ONCIDIUM ORGYALE Rchb. fil. Wawz. Bonpl. Ap. 15, 1854. Lindl. F. sub 17. p. 8:

O. caule longo rameso volubili, bracteis subrotundis amplexicaulibus, sepalis undulatis unguiculatis lateribus basi connatis lanceolatis, dorsali ovato, petalis ovato-oblongis subsessilibus, labello oblongo basi acutangulo apice linguaeformi deflexo columnae adnato, lamellis tribus in medio, quarum laterales pronae, media rhombea erecta dentibus 2 in fronte verrucisque pluribus in lineam obliquam ordinatis, columnae clavatae glabrae alis obsoletis dentiformibus obtusis vel emarginatis.

Flowers one inch and a half in diameter, dark violet. Leaves a foot and more long, by one inch and a half wide, acute, narrowed and chanelled at the base. The crest consists of three plates, of which the middle one is triangular and erect, the laterals adnate, all vanishing towards the foot of the column; in addition to which there are two small teeth in front, and a diagonal line of warts on each side. The column was certainly not apterous in any of the specimens examined by me.

Wild in New-Granada; in the province of Mariquita—Triana, 133. Warsoewicz; in the province of Pamplona, at the height of 9000 feet, flowering in November—Schl., Nr. 3, Nr. 1167 hb. Hooker, Nr. 1168 Rchb.

Rchb. fil. v. Warscewicz Bonpl. II. 102:

Aff. O. undulato labelli carina rhombea erecta, lamella supina utrinque, ligulis parvis anticis geminis, gynostemio aptero.

Pedunculus validus tortus orgyalis, ramuli gracilenti basecos flexuosi pedales, internodiis bipollicaribus, —9flori, bracteae ovatae acutiusculae cucullatae ovaria pedicellata tertia parte aequantes, sepalorum pars quarta infima linearis: unguis; reliqua lamina oblonga acuta basi supraunguiculari latissime cuneata, subundulata, tepala brevissime ac late unguiculata, triangula, basi obtusangula, apice acuta, subundulata, tepalis basi supraunguiculari paulo latiora, ac breviora, labellum a basi hastata triangulum, utrinque medio extrorsum curvilineum, hinc bis sinuatum; acutum, sepalis subduplo brevius, carina in disco basilari oblique antrorsa, oblonga quadrata, nec tantum latere basilari affixa, lamella obtusangula triangula prostrata extrorsa utrinque in latere, ansis 2 minutis postice, ligulis 2 parvis antice, gynostemio antrorsum curvo, aptero, pone latera foveae rotundato, basi tamen utrinque replicato subalato, ab labello prope libero. Blüthen etwas grösser, als bei O. undulatum, von denen sich die Art durch die Buckel der Lippe und durch die flügellose Säule gut unterscheidet. Das uns völlig unbekannte *O. cordatum* Lindl. hat eine genagelte Lippe; schmale spitze Seitenlappen. *O. loxense* Lindl. — uns auch unbekannt — hat eine rundliche Lippe und Arme an der Säule; soll dem O. coryaephorum nahe stehn. New-Granada. v. Warscewicz.

Rchb. fil. Bonpl. II. 279. Ocanna. 6—7000'. Wälder. Mai. Nr. 1168. Schlim.

98. ONCIDIUM TENENSE Rchb. fil. Bonpl. May 1, 1854. Lindl. F. sub 18. p. 8:

Prof. Reichenbach rightly compares this for appearance to O. falcipetalum. It is distinguished by the two small triangular wings being stationed at the base of the stigma, and by the crest, which consists of a few triangular keels pointing forwards, and some sinuous roundish warts standing on either side between it and the lower edge of the lip. I do no not find, that the lip is retuse and tridentate as described by Rchb., who seems to have examined an injured specimen.

Wild in New-Granada, near the village of Tena, in the province of Bogota—Hartweg. Warscewicz.

Rchb. fil. Bonpl. II. 107:

Aff. undulato sepalis brevissime lateque unguiculatis, labello apice retuso obsolete tridentato, carina media erecta triangula, gynostemio gracili a labello libero.

Pedunculus scandens validus, ramuli abbreviati bi—triflori, bracteae ovatae acutae cucullatae membranaceae conspicuae, sepalum summum oblongum acutum late breviterque unguiculatum basi utrinque exauriculatum, sepala lateralia subaequalia, ungue in ima basi communi, laminis rotundis acutis undulatis, tepala latoelliptica acuta, undulata subsessilia ungue lato ac brevissimo, sepalis quarta breviora, labellum triangulum elongatum, basi tamen brevissime ac latissime marginibus ab angulis apiculatis ascendentibus cuneatum (hinc quasi trapezoideum), apice retuso obsolete tridentatum, carina a basi gynostemii ascendens, triangula, anceps antrorsa, addita utrinque carina humilis, versus basin gynostemii, in pede antico papula utrinque triangula parvaeque quaedam circumjectae; gynostemium gracile, recurvum, androclinium haud valde ascendens, auriculae minutae ligulatae antrorsae utrinque pone basin

foveae, tabula infrastigmatica utrinque angulata. Gynostemium super labellum erectum nec cum basi connatum! (more O. undulati, refracti). Cyrtochilum undulatum Lindl. in pl. Hartw. exsicc. Blüthen so gross, wie die des O. falcipetalum Lindl. Bei dem Dorfe Tena in der Provinz Bogota. Hartweg.

19. ONCIDIUM CORYNEPHORUM Lindl. Sert. Orch. sub t. 25. F. l. c. p. 8:
Cyrtochilum volubile Pöppig N. G. I. 35, t. 61!

Scapes twining, fifteen to twenty feet long. Sepals dull brown; petals pale cinnamon, white on the upper half; lip deep crimson, white at the base. The crest consists of three connate parallel ribs, and a few round tubercles on each side. Column absolutely apterous. I have a flower of the original specimen in Pöppig's collections, from Rchb.

Wild in Peru; Mayobambo Matthews in hb. Hooker; tall trees on the mountains of Casapillo, near the hacienda of Cuchero-Pöppig.

Lindl. Sert. l. c.: Pseudobulbis angustissimis compressis, foliis anguste-lanceolatis acutissimis, scapo ramoso paniculato, bracteis membranaceis subrotundis obtusissimis, sepalis petalisque subrotundo-oblongis longe unguiculatis, petalis angustioribus lanceolatis acutis reflexis, labello sessili obovato rotundato, callis baseos depressis apice trinis latere rugosis tuberculatis, columna clavata alis inflexis aptera.

Peruv. Matthews 1918.

Lindl. Paxt. II. 129. The twining scapes 15—20' long. Flowers 2'' diam., deep crimson, above the middle. No doubt *Cyrtochilum volubile* Pöpp. I have no doubt it is the same plant as Pöppigs.

20. ONCIDIUM LOXENSE Lindl. in Paxt. Fl. Garden, II. 128. L. F. p. 9:

This seems to be a very rare plant. Hartweg found but a single specimen, the panicle of which was nine feet long. The flowers are as in falcipetalum; their colour seems to be purple, judging from the dried specimen.

Wild in Peru; on the Cordillera near Loxa—Hartweg.

Lindl. l. c.:

Panicula ramosa divaricata ramulis 2—3 floris, bracteis brevibus ovatis obtusis, sepalis oblongis planis reflexis petalisque paulo latioribus apice rotundatis, labello subrotundo basi subhastato, apice excavato, callis baseos 3 parallelis ramentis pluribus a fronte, columna aptera basi bibrachiata.

Cordillera near Loxa.

Of this a single plant was found by Hartweg, with a flower stem 9 feet long. It is very near O. corynephorum, but the flowers are more than twice as large, the lip has quite a different form and the column has two short spreading arms near the base, of which no trace is to be found either in Pöppigs figure or in Matthew's drawing in our possession.

Cimicifera.

21. ONCIDIUM MICROCHILUM Bateman in Bot. Reg. 1843. t. 23. L. F. p. 9:

Flowers in a large glaucous branching panicle. Sepals dull brown; petals dull purple with a yellowish border; lip spotted, crimson and yellow in the centre, pure white on the side lobes. Wings of column yellow, painted with purple.

Wild in Guatemala. Skinner.

Bat. l. c. B. Reg. XXVI. 1840. Misc. 193:

Pseudobulbis lenticularibus brevibus monophyllis, folio ensiformi carinato carnosissimo acuto quam scapus erectus versus apicem paniculatus quadruplo breviore, sepalis liberis lateralibus longius unguiculatis retusis, labello subrotundo tridentato sepalis duplo breviore crista sub-

rotunda 5 crenata dente intermedio labelli parum breviore, columnae nanae alis oblique truncatis.

Guatemala. Skinner leg., Bateman col. He truly calls it a most distinct and remarkable species, the smallness of its lip, which is not half so long as the lateral sepals being a singular feature. The leaves are about 8" long, the flowers the colour of O. crispum.

Lindl. l. c. 1848. t. 28: eadem quae supra, ceterum:

Folio oblongo —, labello duplo latiore, quam longo, lobo intermedio nano triangulari, lateralibus rotundatis planis, crista reniformi crenata, columnae nanae alis subulatis apice glanduligeris.

22. ONCIDIUM CIMICIFERUM Rchb. fil. Lindl. F. sub 22, p. 9:

Odontoglossum cimiciferum Rchb. fil. in Linn., Xen. 849. Fol. Orch. Nr. 43.

Cyrtochilum flexuosum HBK. LO. p. 210.

Oncidium flexuosum Lindl. Sert. Orch. sub t. 48, not of Sims.

A small-flowered species with a great straggling climbing panicle. Flowers brownish with a yellow stain on the lip. We owe to Mr. Rchb. the identification of this with „HBK.'s" Cyrtochilum flexuosum, which had been previously a mere puzzle.

Wild in New-Granada; at the foot of the lofty mountain Paramo de las Achupallas between Almaguer and Sa. Cruz, at 9500 ft. — H. and B.; Venezuela, near Agua de Obispo, at 8000 ft. — Funck and Schlim, 1027; Merida, at 8000 feet. — Schlim. fid. Rchb.

C. Walp. Ann. III. p. 559. *O. flexuosum* Lindl. Sert. Rchb. fil. in Bonpl. II. 12: *Cyrtochilum flexuosum* Humb. Kunth. Merida. 8000'. Wagener.

Lindl. Fol. *Odontoglossum cimiciferum* Nr. 43, p. 15:

O. foliis angustis lanceolatis acutis, panicula diffusa volubili, bracteis ovatis acutis cucullatis, sepalis unguiculatis, lateralibus lineari-lanceolatis acuminatis dorsali multo breviore erecto, petalis ellipticis acutis, labello subrotundo convexo apiculato linea elevata in unguem gibbere anteposito pleiodactylo, columna brevi valde clavata auriculis obsoletis.

A singular small-flowered climbing species much like some Oncidium, and remarkable for the large apparently coloured bracts, seated singly at each flexure of the straggling panicle. Flowers brownish, with a yellow spot on the lip (F. and S.), which much resembles in form some species of Cimex. I am unable to make out any auricles on the column. Mr. Reichenbach mentions them as very short, usually obsolete, ear-shaped and acute.

Wild in Venezuela; in the province of Truxillo, near the Agua de Obispo, at the height of 8000 feet, flowering in September—Funck and Schlim, 1027; Moritz 1096b, R.

Lindl. Sert. l. c.; Neu-Granada. Lip ovate, acute, convex, crested with tubercles at the base. Scape several feet high, much branched, with triangular ramifications etc. to them. A mere puzzle without access to the orig. specimens.

23. ONCIDIUM COCCIFERUM Rchb. fil. in Bonpl. Ap. 15, 1854. L. F. sub 23, p. 9:

A species with great panicles of small brown flowers. Distinguished from the last by the crest and by the lateral sepals being ovate and hardly longer than the lip.

Wild in Peru; at the sources of the Maranon—Warscewicz; Neu-Granada, Mesa Rica, in the province of Ocanna, at 9000 ft. — Schlim., 30; St. Miguel in the Sierra Nevada of Sta. Martha—Purdie in hb. Hooker.

Oncidium (Cyrtochila cimicifera) *cocciferum* Rchb. fil. Warswcz. Bonpl. II. 101:

Aff. *O. cimicifero* Rchb. fil. (flexuoso Lindl. nec Sims.) sepalis tepalisque subaequalibus, labello nullibi velutino, carina utrinque tridentata acuta per discum, verruculis circumstantibus, gynostemio utrinque biauriculato. Panicula ampla laxa, diffusa fractiflexa (hinc illi Oncid. pulvinati, illinc illi O. cimiciferi similis), ramuli 3—5 flori, valde fractiflexi, bracteae triangulae acutae, septimam ovarii pedicellati vix aequantes, tepala transversa ovata apiculata, latius unguiculata, lateralia vulgo dorsali aliquid longiora

tepala sepalo dorsali subaequalia, labellum triangulum, basi hastato cordatum, tepalis paulo brevius, carina depressa a basi usque ultra medium, apice acuta, utrinque tridentata, dorso hinc illinc varicosa s. verruculosa, verruculae hinc illinc circumjectae, locus velutinus utrinque pone carinam nullus, gynostemium humile, limbus infrastigmaticus utrinque sub fovea stigmatica auriculata productus. — Blüthen etwas grösser, als die des *Oncidium flexuosum* Lindl. N.-Granada. v. Warscewicz.

Rchb. fil. Bonpl. II. 279. Blüthen braun. Lippe gelb. Neu-Granada. Provinz Mesarica. 6000′. Juli. Nr. 30. Schlim.

Rchb. fil. Bonpl. III. 66. Teoramas. Wagener.

24. ONCIDIUM TRULLA Rchb. fil. in Bonpl. Ap. 15, 1854. L. F. p. 9:

Said by Rchb. to resemble O. cimiciferum (nr. 22). The bracts are described as very minute, the panicle three feet long, the lip triangular, about as long as the petals, angular at the base, the crest composed of one narrow erect keel sloping to the base, having a few lobes and hooks on each side, and a downy space in front of the keel. The flowers are smaller than in O. cimiciferum. A fragment communicated by Rchb. shows that this is a correct statement. The plant is very near O. examinans.

Wild in New-Granada. v. Warscewicz.

O. (*Cyrtochilum flexuosum*) *trulla* Rchb. fil. v. Wswz. Bonplandia II. 101:

Affine O. flexuoso bracteis minutissimis, labelli carina erecta lobulis carinisque lateralibus aucta, gynostemio anguligero.

Panicula tripedalis, rami rari, cum ramulis tenues, fractiflexi, bracteae triangulae acutae ovarii pedicellati quintam sextamve aequantes, sepala oblonga acutiuscula, lateralia longiora, omnia dimidio minori inferiori latius unguiculata, ungue in cuneatam laminae basin sensim transeunte, tepala ovata acuta basi cuneata, sepalo dorsali bene breviora, labellum triangulum tepalis subaequale, basi utrinque supra angulos laterales acutiusculos prosilientes rotundatum, margines laterales etiam subrotundati, carina angusta erecta ascendens et praerupta a basi in medium, lobulis ansisque quibusdam lateralibus, regio carinae proxima subvelutina, gynostemium clavatum, utrinque sub fovea angulatum. Blüthen kleiner, als bei *O. cimiciferum* Rchb. fil. Neu-Granada. v. Warscewicz.

Diese zwei Arten stehen dem *Oncidium cimiciferum* Rchb. fil. sehr nahe. In Bezug auf Tepala und die sammtige Umgebung des Kieles ist O. trulla sehr übereinstimmend mit diesem, allein es fehlen die Zähnchen vor dem Kiele. Die Säule hat Ecken, die Deckblätter sind nicht gross und kappig. Das Oncidium cocciferum ist sehr verschieden durch kleine Deckblätter, fast gleich breite Sepala und Tepala, mangelnden Sammtfleck beiderseits des Kiels, keine Fingerchen vor demselben, Ecken der Säule u. s. w.

Rchb. fil. Bonpl. III. 66. Pseudobulbus und Blatt wie bei Odontoglossum odoratum Lindl. 6000′. März. Ocanna. Wagener.

25. ONCIDIUM EXAMINANS Lindl. Fol. I. p. 9. N. 25:

O. folio lato-ensiformi canaliculato panicula divaricata ramosissima multo breviore, ramis ramulisque arcte flexuosis, bracteis minutis, sepalis subrotundis acutis unguiculatis, petalis subsessilibus latioribus, labello obtuse triangulari, crista carinata utrinque bicallosa verruca remota utrinque, col. erostri basi bigibba alis semiovatis acutis erectis.

This is a strong growing plant with oblong pseudobulbs, leaves 18 inches long, and a stiff branching straggling panicle at least twice as high. The flowers are small, apparently brown, and as thickly clustered on the branches as a swarm of bees. It differs from O. trulla in its large acute columnwings, less simple crest, with a pair of outlying papillae. A small specimen was sent some years ago from M. Pescatore's collection under the name of O. dichromaticum, applied by Rchb. to a different species.

Wild in the Caraccas. Santa Martha — Purdie.

§. 2. Equitantia. Lindl. l. c. 10.

Analysis of the Species.

A. Scapus foliis subaequalis, pauciflorus.

Labellum crista lamellata . . . . 26. *iridifolium.*
Labellum crista incisa.
barbata . . . . 27. *glossomystax.*
antrorsum lacera . . . . 28. *Pumilio.*

Scapus elongatus.

Labellum indivisum, crista maxima hirta hexura . . . . 29. *Henchenii.*
Labelli lobi subaequales
3, lobo medio acuto, crista 0 . . . . 30. *triquetrum.*
4, lobo medio bilobo, crista lamellata . . . . 31. *pulchellum.*
Labelli lobi valde inaequales
Flores lutei.
cristae lamellis integris.
Petala cuneata retusa . . . . 32. *Lemonianum.*
„ obovata apiculata . . . . 33. *urophyllum.*
cristae lamellis quibusdam laceris . . . . 34. *mirabile.*
Flores albi vel rosei
Sepala disjuncta . . . . 35. *onustum.*
„ lateralia connata.
apice libera acuta . . . . 36. *tetrapetalum.*
apice indivisa obtusa.
labelli lobus medius sessilis . . . . 37. *velutinum.*
labelli lobus medius unguiculatus . . . . 38. *variegatum.*

A. Scapus foliis subaequalis, pauciflorus.

26. ONCIDIUM PUSILLUM Rchb. fil. Mss. *O. iridifolium* H. B. K. Huc: *Epidendrum pusillum* L. Sp. Pl. 1352 etc. cf. L. O. p. 202: L. F. sub 26:

This very common plant seems to occur everywhere within the tropics of America: but other species are no doubt sometimes mistaken for it. According to Descourtilz it is found in Brazil exclusively on branches of the Orange and Lemon tree, choosing dry places exposed to the sun; but Mr. Spruce gathered it on the Sapotilla. The plant figured under this name in the „Botanical Register," t. 1911, is no doubt quite distinct as Prof. Reichenbach has pointed out (B. Zeit. 1852, p. 697). See O. decipiens hereafter (Nr. 68).

Wild in tropical America; Mexico, province of Mirador — Linden; Guatemala — Skinner; Guayaquil, on trees — Jamieson; Peru — Maclean; N.-Granada — Lobb, Purdie; Guyana — Schomburgk; Brazil, on trees near the Para — Spruce 104, 108.

Lindl. Bot. Reg. XXIV. (1838). sub t. 88: Branches of Orange and Lemon trees only. Very common in the neighbourhood of the town of Jesus de Bananal. It prefers dry places, exposed to the sun. Brazil. Descourtilz. — Sert. sub 48: „scapo simplici, subbifloro, labelli maximi crista depressa quinqueloba apice truncata." — A small species with singularly large flowers for its size otherwise. The fruit is large, has six transparent wings.

27. ONCIDIUM GLOSSOMYSTAX Rchb. fil. in B. Ztg. 1852, p. 697. L. F. sub 27. p. 11:

Very like the last, with which it is no doubt confounded; the crest consists of four linear arms, each terminated by a tuft of hairs. Apparently Schlim's 1023 from Ocanna is the same, but my solitary flower is not sufficiently examinable.

Wild in Guatemala — Skinner; Peru — Rchb., Mathews in hb. Hooker; Mexico, Vera Cruz, on Mimosas, near rivulets, very rare — Galeotti 5133.

Oncidium glossomystax Rchb. fil. in v. Mohl und v. Schl. B. Z. 1852. 696:

Perigonii phyllo summo ovali acuto, lateralibus externis lanceolatis acutis, internis oblongis, acutis, vix majoribus, labello brevissimo late cuneato, trilobo, lobis lateralibus oblongis retusis, apicem versus dilatatis, medio late unguiculato, dein dilatato, reniformi, bi-, seu quadrilobo, lamellis 2 supinis parvis in basi antrorsum in fila plurima laceris, crista anteposita rhombea dorso aequaliter penicillata, gynostemii alis dolabriformibus, vix crenulatis, alulis parvis suppositis, rostello retusiusculo.

Eine niedliche Pflanze mit 3 — 4''' langen Blättern, beardünnen, 1 — 2 blüthigen Blüthenstielchen, ganz kurzen, gekielten Deckblättern. Blüthen halb so gross, als die des O. iridifolium. Loxa. Rchb. fil. l. c: Tocache in Peru. 857. Pöppig.

Rchb. fil. Bonpl. III. 66. Ocanna. 3000'. März. Wagener.

28. ONCIDIUM PUMILIO Rchb. fil. in L. F. sub 28. p. 11:

This is said to be very like the last, but different in the lip and column. The former has a double crest, the lower half of which is rather the longer, with a few finger-like lobes, the upper half shorter, deeper, with upper edge lacerated. The wings of the column are described as quadrangular and nearly entire. A flower from Prof. Rchb. shows it to be very distinct from the preceding.

Wild in Brazil — Martius hb. 564.

O. Pumilio Rchb. fil. in v. Mohl und v. Schl. B. Z. 1852. 695:

Perigonii phyllo summo ac lateralibus internis ovatis, minutis, lateralibus externis lanceolatis, acutis, labello basi cuneato, dein trilobo, lobis lateralibus auriculaeformibus, abbreviatis, medio cuneato, dein dilatato, quadrilobo, lobis externis obtusangulis, dilatatis, medianis multo angustioribus productis, carina bipartita in basi, partitione postica paulo longiori, oligodactyla humiliori, anteriori margine superiori lacera, breviori, altiori, alis gynostemii quadratis, assurgentibus, subintegerrimis.

Vorigem täuschend ähnlich, allein durch Lippe und Säule weit verschieden. Von Martius Herb. Brasil. 564. —

B. Scapus elongatus.

29. ONCIDIUM HENEKENII Lindl. Fol. sub 29. p. 11:

O. foliis cultratis obtusis denticulatis scapo subpaniculato multo brevioribus, rhachi flexuosa, sepalo inferiori bifido 2-carinato, labello obovato emarginato pubescente, crista maxima hirta antice bipartita caudis 2 utrinque, columna basi dente truncato antice aucta, alis minimis linearibus.

This very curious plant might be mistaken, when out of flower, for O. variegatum but its remarkable zigzag rachis, dark brown flowers, and strange hairy crest, are unlike anything else in the genus. This crest resembles a shaggy plate, nearly as large as the lip itself, cloven by a deep anterior slit, and divided on each side into three parts, of which the two basal are taper and tail-like, while that in front is half-lanceolate. The stigma is a projecting cucullate space, almost as much raised above level of the anther-bed as in a Neottia.

Wild in St. Domingo; Ponton, on Cacti, Randia and other prickly bushes—Schomb.

30. ONCIDIUM TRIQUETRUM L. F. p. 12. — Hook. Bot. Mag. 3393. — Hook. Lond. Journ. Bot. III. 1844. 527. Jamaica. Purdie. Sert. O. sub 48:

Foliis triquetris cultratis acutis, scapo simplici 5-floro, sepalis acutis

anticis connatis, petalis multo majoribus, labelli lobo medio ovato indiviso lateralibus rotundatis, crista nulla, columnae alis falcatis bilobis. Jamaica.

Flowers purple and white, lip white with a few deeper dots.

31. ONCIDIUM PULCHELLUM Hooker B. M. t. 2773. L. O. 206. Bot. Cab. t. 1984. Bot. Reg. t. 1787. Paxton's Fl. Gard. sub t. 33. L. F. p. 12:

Flowers large, in a close panicle, white, with a tinge of pink, a yellow crest, and rosy column wings. The upper sepal is boat-shaped, and the round lateral lobes of the lip are as large as half the middle lobe.

Wild in Jamaica—Bancroft etc.; Demerara.

Lindl. Sert. sub 48: Perigonium roseo album, alis columnae purpureis, crista labelli flava. — Quite the habit of O. variegatum and tetrapetalum from both of which it is readily distinguished by the lateral lobes of its labellum and cymbiform upper sepals. Its crest is also essentially different, consisting of 3 narrow, nearly equal collateral obovate calli, in front of which is placed a short tubercle. Its flowers are pure white, with a little orange about the crest of the lip. Column is pink.

32. ONCIDIUM LEMONIANUM Lindl. Bot. Reg. t. 1789:

O. Guibertianum A. Rich. in De la Sagra hist. fisic. pol. y nat. Cub., p. 245 (t. 81.)

Raceme simple. Flowers bright yellow, dotted with crimson. Column wings half ovate, obtuse, repand; lip with the middle lobe serrate and deeply lobed. I am indebted to Prof. Rchb. for Richard's specific character of O. Guibertianum in De la Sagra's work on Cuba, which is not within my reach. There is no doubt that it is a synonym of O. Lemonianum. Prof. Rchb. informs me, that the copy of the work in the Berlin library wants the plate referred to by Richard in the text. — Antigua. Ubde.

Lindl. Bot. Reg. XXI. 1836. 1789:

Foliis compressis acuminatis supra sulcatis, scapo stricto paucifloro, sepalis parvis spatulatis apiculatis omnibus liberis, petalis oblongis undulatis, labelli laciniis lateralibus abbreviatis intermedia maxima reniformi biloba, lobis dentatis ungue brevi margine denticulato, columnae alis subquadratis truncatis oblique undulatis. Perigonium flavum, maculis quibusdam purpureis. Cuba.

Lindl. Pl. Lindl. 1846. p. 13: A little epiphyte with bright yellow flowers growing on old Coffee trees of the Sierra Maestre and on shrubby trees of the plain of Guatanama. Cuba. Mai — Aug. 1758.

Obs. Planta mihi penitus dubia est *Oncidium Guibertianum* A. Rich. Icon serius reperta et addita Berolini, quam habeo mutuatam. Oncid. Lemonianum non est, nam labelli lobi laterales obtusi undulati. Folia parvula carnosa semiteretia subgladiata non bene intelligo. Oncidium Lemonianum praeterea affertur. Haec est diagnosis:

Oncidium Guibertianum A. Rich. Ramon and Sagra p. 245. T. 81:

Ebulbe, foliis parvulis carnosis, semiteretibus subgladiatis, apice acutissimis, 2—2$^1/_2$ pollices altis, vix 2—3 lineas latis glabris verrucoso punctulatis, scapo radicali simplici palmari 3—4 floro, floribus resupinatis luteis, breviter pedunculatis, bractea semiamplexicauli appressa lanceolata acuta suffultis; sepalis parvulis patulis, supremo libero spathulato oblongo apice acuto; lateralibus approximatis tertia parte inferiori inter se coalitis, spathulato lanceolatis acutis, petalis unguiculatis, obverse et late panduratis lobo terminali latiori quam longo apice emarginato; labello maximo unguiculato, multo latiori quam longo emarginato bilobo, lobis lateralibus obtusis undulatis, suberoso denticulatis, basi punctis fuscis cristatis; caruncula subquadrata prominenti obtuse bidentata; gynostemii alis latissimis, subtruncatis, anthera oblonga parce prominente medio subcristata. Cuba.

33. **ONCIDIUM UROPHYLLUM** Lodd. Cat. ed. 2., nr. 1881. Lindl. l. c. sub 33. p. 12:

Flowers in a loose panicle, deep yellow above, pallid beneath, with crimson stains about the crest and at the base of the petals.

Wild in Brazil. Loddiges.

Lindl. Sert. sub 48: Flowers bright yellow, in a slender delicate panicle, as much as 4' long. Centre of the lip and base of the petals reddish brown.

Lindl. Bot. Reg. XXVIII. (1842.) 54:

Foliis equitantibus margine plano acutissimis, scapo longo pendulo paniculato, sepalis linearibus acuminatis lateralibus ad apicem fere connatis, petalis obovato-subrotundis apiculatis, labelli lobis lateralibus brevibus convexis obtusis, intermedio unguiculato reniformi emarginato, cristae tuberculis duobus uno ante alterum trilobis, columnae alis maximis acinaciformibus rotundatis. Brazil.

34. **ONCIDIUM MIRABILE** Rchb. fil. Lindl. Fol. Nr. 34. Cf. Lockhartiam.

35. **ONCIDIUM ONUSTUM** Lindl. Fol. sub 35. p. 12:

Flowers large, very densely arranged in a nodding raceme, apparently white. Column very short, with two long linear arms. Lip with a crest consisting of three rounded concave lobes. By mistake this has been hitherto misplaced in the genus its equitant leaves having been overlooked.

Wild in Panama and Western Columbia. Cuming 1208.

36. **ONCIDIUM TETRAPETALUM** Lindl. Fol. sub 36. p. 12:

(A.) Flowers small, dingy brown, with rose-coloured speckles.

O. pauciflorum LO. p. 198.

(B.) Flowers large, in a close panicle, brilliantly coloured white, green and crimson.

O. tricolor Hooker, Bot. Mag. t. 4130.

'A very common and rather variable West Indian plant, always having a lip snow-white except around the crest. There is no difference between A. and B. except, that the latter is on a larger scale, and has very bright green sepals and petals banded with crimson. A narrow-leaved var. found by Lobb in N. Grenada occurs in Sir W. Hooker's herbarium. It is evident the plant varies much in size.

Wild in the West Indies; A. Jamaica—Swartz; Mexico—Pavon; N.-Grenada—Lobb. B. Jamaica?—Purdie? Cumana—Fink, 293, in hb. Hooker.

Lindl. Bot. Reg. 1838. (XXIV.) Misc. 56: Flowered lately in the Garden of Hort. Soc. imported by John Henry Lancas, Esq. from Jamaica. It proves to have triquetrous leaves, and therefore has been arranged in its wrong place in the work above quoted. Although the flowers are among the smallest in the genus, they are extremely pretty. The labellum is a pure dead alabaster white, except at its base, where it is covered with yellow and brown tubercles. The sepals and petals are gaily barred and spotted with brown, while the column has 2 large pink spotted spreading wings. Jacq. describes the species as having a flowering scape 2' high; that which appears in the Hortic. Gard. was scarcely 6" high, for the plant though healthy was weak and had suffered from its voyage. When in perfection this species will be found among the handsomest of the smallflowered epiphytes.

Lindl. Sert. sub 48: „crista bis—ter tuberculata, alis columnae magnis acinaciformibus denticulatis." — A small species, with olive brown flowers, whose lip is pure white except in the middle. The crest consists of 6 blunt tubercles in two series, one resting on the other.

82. **ONCIDIUM VELUTINUM** Lindl. in Paxt. Fl. Gard. under t. 33. L. F. 13:

In general appearance, this and O. variegatum correspond, as also in the ragged edge of the foliage; but they differ in the flowers of this being downy, the wings of the column blunt, the middle lobe of the lip perfectly sessile, and the lateral lobes joining it by a broad base. The crest, too, consists of five tubercles, of which the

uppermost are much the longest. The plant is stated by M. Linden to vary with white or rose-coloured flowers, as well as in stature — a large form growing in the Pine forests of Yatera, in Cuba, the smaller on Coffee-trees in the Sierra Maestra and on the Liban mountain.

Wild in Cuba—Linden, 1759; St. Bartholomew's—Fournström in hb. Rchb.

Lindl. l. c. p. 166:

Foliis acutis carnosis equitantibus serrulatis, floribus velutinis paniculatis, sepalo dorsali obcordato lateribus in unum obtusum cochleatum connatis, petalis suborbicularibus basi paululum angustatis, labelli laciniis lateralibus rotundatis, quam petala multo minoribus in intermediam decurrentibus latam sessilem bilobam; cristae tuberculis 2 posticis elongatis tribusque minoribus anticis, alis columnae acinaciformibus obtusis integerrimis.

O. variegatum Orch. Lind. Cuba.

Lindl. Orch. Lind. p. 13. Nr. 72. A graceful epiphyte. Localities of Oncidium Lemonianum etc. quae supra.

38. ONCIDIUM VARIEGATUM Swartz l. c. sub 38. p. 13:

When in health the leaves are fleshy, three or four inches long, equitant, sharp-pointed, and very much broken at the edge. The panicle is a foot and a half high, erect, with flat, pink flowers, richly stained with cinnamon-red on the petals, and at the base of the sepals and lip. The lower sepals form a blunt spoon-shaped body; the petals are large, obovate, almost retuse, with an intermediate point; the lip has the middle lobe distinctly placed upon a somewhat serrated isthmus; the crest consists of two sets of tubercles, one lying on the other, the upper set made up of two large lateral ones, and a minute one in the middle, the lower set, of three equal blunt ones, the intermediate of which is curved upwards.

Wild in the West-Indies; St. Domingo, Mackenzie, chiefly in the Cibao district, where it is called „Angelida" — Schomburgk; Cuba — Sir C. Lemon.

Lindl. Sert. sub 48: Foliis oblongis acutis, complicatis falcatis margine cartilagineo serrulatis, scapo multifloro simplici paniculato, sepalis obtusis, subiobatis, labelli lobis lateralibus ovatis obtusis recurvis, intermedio reniformi undulato bilobo minoribus, crista trilamellata, columnae alis acinaciformibus integris.

St. Domingo. Cuba.

Dist: from O. tetrapetalum by its broader, serrulated leaves, [and its acuminate, not obtuse] sepals. It is also a much larger plant.

Lindl Paxt. I. p. 165. t. 33: Foliis carnosis acuminatis serrulatis, floribus paniculatis, sepalis inferioribus in unum cochleatum connatis, petalis obovatis unguiculatis emarginatis cuspidatis, labelli laciniis lateralibus nanis acutis, intermedia lata biloba ungue denticulato, crista duplici superne biloba, inferne 3loba, alis columnae acinaciformibus acuminatis integerrimis.

The variegated Oncid is very like O. tetrapetalum, from which it differs in having the leaves broken up at the edge, petals coloured, broad and cuspidate, not herbaceous, blunt and serrulate, in the double sepals being blunt and spoonshaped, not divided into two taperpointed divisions and in its richer colours.

38b. ONCIDIUM LEIBOLDI Rchb. fil. in Herb.:

Foliis abbreviatis acinaciformibus acutis, dorso ac ventre retuso crenulatis, dorso rectis, vertice semiovatis siccis bene nervosis, pedunculis superne racemosis, paucifloris, sepalo summo cuneato oblongo obtuso, inferiori paulo latiore binervi, bidentato, tepalis cuneato oblongis obtusis, longioribus, quater latioribus, labello pandurato partitionibus posticis triangulis limbo antice denticulatis, portionibus anticis semioblongis semicordatis antice isthmo separatis, antice denticulatis

(si mavis partitione antica reniformi emarginata antice denticulata), callis trilobis geminis in basi deinceps, lobo medio longiori. omnibus lobis obtusis, columnae alis dolabriformibus denticulatis, tabula porrecta.

Cuba. Leibold! Wright (*Oncidium variegatum* Lindl. nec Sw.) 668.

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§. 3. Teretifolia.

Analysis of the species.

Alae et crista obsoletae . . . . 39. *nudum*.
„ „ conspicuae
tuberculum cristae solitarium . . . . 40. *stipitatum*.
„ „ 3-plura.
alae rotundatae, petala obtusa majora . . . . 41. *Sprucei*.
alae lunatae . . . . 42. *Cebolleta*.
alae lineares incurvae; cristae tub. 7. . . . . 43. *ascendens*.

39. ONCIDIUM NUDUM Batem. in B. R. t. 1994. L. F. l. c. p. 13:

Flowers smallest in this §. Lip yellow. Sepals and petals greenish with crimson spots. Leaves about seven inches long.

Wild in the Caraccas—Bateman; Venezuela—Fünck and Schlim 481.

Bat. l. c.:

Foliis teretibus, sepalis petalisque subsessilibus rotundatis acutis concavis, labelli lobis lateralibus linearibus recurvis, intermedio obovato emarginato, cristae callis 3linearibus in fronte lunulaque crenata convexa ad basin.

Caracas. Otto.

Sepals green spotted with brown. Lip very long, pure yellow.

Rchb. fil. Bonpl. II. 14. Caracas. 100'. Juli. Wagener! l. c. III. 66. S. Marta. März. Wagener!

40. ONCIDIUM STIPITATUM Lindl. in Bot. Sulphur. p. 172. L. F. l. c. p. 13:

O. lacerum Lindl. Bot. Reg. 1846. t. 27.

Flowers larger, than in the last, pale sulphur-yellow with sepals and petals dotted with crimson, and a crimson stain below the crest. Middle lobe of lip with a long narrow isthmus, coarsely-toothed and two-lobed; lateral lobes falcate. Wings of downy column half ovate, acute.

Wild in Panama—Sinclair.

O. stipitatum cf. Walp. Ann I. 789. *O. lacerum* Lindl. cf. Walp. l. c. addendis:

Habit of O. longifolium, but rather denser, flowers with a lacerated and rather crisp middle lobe to the lip, and a crest consisting of one transverse tubercle like that of O. nudum, and another larger, compressed, rounded, and at right angles to it in front.

41. ONCIDIUM SPRUCEI L. F. p. 14. sub 41:

O. racemo paniculato, rachi flexuosa, sepalis petalisque obovatis obtusis, labelli lobo medio transverso bilobo anguste unguiculato, lateralibus obovatis, cristae tuberculis 3 medio, erecto rotundato compresso, lateralibus acutis pronis, columnae alis circularibus.

Leaves furrowed, some times two feet seven inches long, and two and three quarter inches in circumference. Sepals and petals yellow, coloured with red above. Lip yellow, stained with red at base, and spotted with red at back. — Spruce. This

seems to be distinct from any of the forms of O. Cebolleta. Mr. Gardner distinguished it under the name O. urophyllum, now otherwise applied.

Wild in Brazil: common on trees at the junction of R. Negro and Solimaes—Spruce, 1526; on trees to S. of Oeiras—Gardner, 2732; common on the branches of a species of Geoffraea between Ico and Crato—vernac. Rabo de Satu or Armadillo's tail.

42. ONCIDIUM CEBOLLETA Swartz Act. Holm. 1800. 240. L. O. 206. L. F. p. 14:

(A.) Flowers smaller; lateral lobes of lip small, obliquely ovate. Leaves very long, erect.

O. juncifolium Lindl. Coll. Bot. p. 27.

O. Cepula Hoffmgg.

(B.) Flowers with the lateral lobes of lip obliquely ovate-oblong. Leaves very short, erect.

O. brachyphyllum Lindl. B. R. sub t. 4.

(C.) Flowers large, in a dense panicle. Lateral lobes of lip dolabriform. Sepals and petals very blunt. Leaves long, spreading on the ground.

O. longifolium Lindl. in Bot. Reg. 1841. Misc. 56. 1842. t. 4.

Wild in the West-Indies, etc.; A. Carthagena in woods—Jacquin; Brazil, near Santarem in Para—Spruce; Sa. Martha—Purdie; Mexico, in the prov. of Mirador—Linden, 225; B. Mexico—Hartweg; C. Mexico—Hartweg.

Different as these plants often are, I feel persuaded that they are only forms of one common variable species. The peculiarities of the leaves seem to depend on the place of growth. C. is the most distinct of the three. In some states the corolla is spotted with rose-colour at the back, in others it is quite whole-coloured. Although seldom cultivated, even the worst of the forms makes a gay addition to a collection.

Huc: *O. longifolium* Lindl. Bot. Reg. XXVI. 1841. Misc. 56:

Foliis teretibus longissimis diffusis, scapo erecto dense paniculato, sepalis petalisque apiculatis, obtuse concavis, labelli lobis lateralibus oblique ovatis intermedio obovato bifido minoribus, tuberculo basi depresso antice tricorni glabro, columnae alis brevibus rotundatis.

Although this species has the foliage of O. Ceboletta, it is really very different, forming dense panicles, 3 feet long, of very large and showy yellow and brown flowers. Its leaves are often 8' long and hang down or spread upon the ground instead of standing stiff and erect, as in the allied species, several of which are as yet but little known. Imp. Hort. Soc.

Bot. Reg. XXVIII. 1842. 4. Folia tripedalia, flagelliformia, prostrata. Scapus 3—4-pedalis paniculatus. Sepala et petala lutea sanguineo-maculata; labellum luteum sanguineo prope basin marginatum. Mexico.

Huc: *Oncidium brachyphyllum* Lindl. l. c.:

Foliis crassissimis brevibus erectis acutis, panicula laxa pauciflora, sepalis petalisque obovatis acuminatis longe unguiculatis, labelli lobis lateralibus patentibus ovalibus acutis, intermedio reniformi emarginato longioribus, tuberculo tricorni subverrucoso, columnae alis sublunatis brevibus rotundatis.

Mexico. Very short stiff leaves, and small panicles, not above 18" high.

43. ONCIDIUM ASCENDENS Lindl. in Bot. Reg. 1842, sub t. 4. L. F. p. 15:

Flowers scarcely larger, than in O. nudum, yellow with red in the region of the crest, and in the form of stains on the sepals and petals. The linear incurved column-wings are characteristic.

Wild in Sa. Lucia—herb. Banks; Guatemala—Hartweg; Mexico, Chinantla near Oaxaca, at 2000 feet.—Galeotti, 5351.

Huc: O. *adscendens* Lindl. B. Reg. XXVIII. 1842. sub 4:

Foliis erectis junceis, scapo stricto paniculato aequalibus, sepalis petalisque obovatis obtusis concavis, labelli lobis lateralibus nanis erectis intermedio reniformi emarginato, tuberculo ovato 7-dentato, columnae alis linearibus integerrimis incurvis.

Guatemala. Has much the habit of O. Cebolleta but the linear wings of the column, the small erect lateral lobes of the lip, and the manytoothed tubercle distinguish it at once.

43 b. ONCIDIUM SUPERFLUUM Rchb. fil. Mss.:

Pusillum, pseudobulbis cylindraceis (compressis?), folio tereti acuminato, racemo abbreviato, bracteis triangulis parvis, sepalo dorsali ligulato fornicato, sepalis lateralibus obovatis retusis, tepalis paulo minoribus, labello unguiculato, quadrato dilatato emarginato, callo semilunari in ungue, columna brevi, utrinque medio unidentata, anthera proboscidea.

Minas Geraës 778. Widgren! (Est „Leochilus").

§. 4. Tetrapetala barbata.

Analysis of the species.

Scapi foliis subaequales
- pseudobulbis monophyllis; pedunculo subunifloro, crista polydactyla . . . . 44. *uniflorum.*
- pseudobulbis diphyllis; pedunculis 2—5-floris, crista tomentosa ½ 45. *longipes.*

Scapi elongati paniculati
- petalis acuminatis sepalisque undulatis conformibus . . . . . 46. *trichodes.*
- petalis obtusis sepalis subaequalibus
  - sepalis basi connatis . . . . 47. *barbatum.*
  - „ ultra medium connatis . . . . 48. *micropogon.*
- petalis maximis circularibus labello subaequalibus . . . . 49. *macropetalum.*

44. ONCIDIUM UNIFLORUM Lindl. B. R. 1843. t. 43. L. F. p. 15. (falsa auctoritate „Ldl." pro „Booth". Rchb. fil.)

This and the next are much alike; but the crest of this consists of an oblong cluster of numerous small smooth fingers, and the wings of the column are conspicuously two-lobed; on the contrary, in O. longipes the crest is downy, with four blunt teeth standing some way behind three others which are larger; and the wings of the column are rudimentary. Flowers in both greenish, with a bright yellow lip.

Wild in Brazil; on trees in the Organ Mountains, in forests—Gardner, 5873 and 640.

Huc: *Oncidium uniflorum* Booth in litt. B. R. l. c.:

Caespitosum, pseudobulbis angustis linearibus squamatis sulcatis monophyllis, foliis linearilanceolatis obtusis undulatis apiculatis, scapo unifloro folio multo breviore, sepalis lateralibus basi connatis petalisque obovato oblongis undulatis herbaceis, labello pandurato lobo intermedio maximo emarginato lateralibus nanis rotundatis sinu fimbriato, crista pubescente polydactyla lacinia utrinque libera solitaria, columnae alis truncatis erosis.

Allied to the rare Oncidium barbatum, inhabits trees in the forests of the Organ Mountains of Brazil, where it was found in April 1841 by Mr. Gardner.

Mr. Lemon received it from Brazil in Aug. 1841 through Lieutenant Turner of H. M. Packet „Ranger" and in whose coll. at Carclew it fl. 1842. Novbr.

Sepala et petala viridia, labellum flavum.

45. ONCIDIUM LONGIPES Lindley in Paxt. Fl. Gard., I. no. 76. Lindl. Fol. p. 15:

O. janeirense Rchb. fil. in Bonpl. Ap. I. 1854!

A specimen in Prof. Rchb.'s herbarium has five flowers instead of two, as in the plant described by me.

Wild in Brazil; near Rio Janeiro—Morel.

Huc: *Oncidium longipes* Lindl. B. Paxt. Fl. G. l. c. p. 46:

Pseudobulbis ovalibus diphyllis, foliis angustis tenuibus, scapo bifloro foliis aequali, pedunculis elongatis, sepalis lateralibus elongatis pendulis basi connatis, dorsali breviore latiore refracto, petalis oblongis planis, labelli lobis lateralibus parvis obtusis intermedio transverso apiculato sinu convexo serrato, crista pubescente depressa basi simplici truncata papilla utrinque adpressa apice triloba, columnae alis minimis sinuatis.

Habit of uniflorum, but sepals and petals deeply stained with brown.

45 b. ONCIDIUM JANEIRENSE Rchb. fil. Bonpl. II. p. 90:

Aff. O. longipedi ex descriptione insufficienti non intelligibili: sepalis unguiculatis, tepalis cuneatis, labello pandurato, antice reniformi in sinu serrulato, callo velutino pluripartito superne serrulato, alis gynostemii in lineam angustissimam obsoletis basi lobulatam, tabula in labellum transgrediente (more O. ciliati).

Pseudobulbi oblongi obtuse ancipites, utrinque quadricostati, transsectione elliptici. Folia ligulata, apice attenuata inaequalia, 6—7pollicaria, medio unum pollicem lata. Pedunculus ramosus pedalis. Bracteae spathaceae ovarii pedicellati sesquipollicaris tertiam aequantes. Sepalum summum anguste unguiculatum, undulatum; inferius basi anguste unguiculata connatum, elongatum, dein medio divisum, bifidum, segmento utroque oblongo acuto, postice alato carinato, labello longiori. Tepala obovato cuneata acuta, abbreviata tepalo summo tertia parte breviora. Labellum basi trilobum, lobi laterales obovati divergentes basi inferiori humerati, lobus medius a basi trapezoidea angusta utrinque serrulata reniformis. calli baseos elevati triseriati, pluripartiti, series media elevata; calli rhombei apice crenulati, laterales humilliores polydactyli adjectis callulis quibusdam. Gynostemium rectum, foveae stigmaticae limbus lateralis et tabula infrastigmatica magis adhuc producta, alae plane obliteratae excepto lobulo quodam utrinque pone basin. Von Herrn Consul Schiller erhalten.

Huc: Lemaire Illustr. Horticol. II. Pl. 54. (cum synonymo *Oncidii oxyacanthosmi* Lem.)

Obs. Plantam utramque bene diversam credo.

46. ONCIDIUM TRICHODES Lindl. Fol. l. c. p. 15:

O. sepalis petalisque lanceolatis acuminatis undulatis omnino conformibus, labelli lobo minore oblato apiculato sinubus piliis laciniisque filiformibus fimbriatis, cristae callis 3 verrucis utrinque adjectis.

O. barbatum Paxt. Fl. Gard. ic. xyl. nr. 150.

Sepals and petals dark dusky brown. Lip clear yellow, with a few crimson spots on the crest. Panicle one foot and a half long and branched.

Wild in Brazil; Para—Knowles.

Huc: ex Fl. G.: Differs from O. ciliatum in its petals being acuminate, not obtuse or emarginate, in the middle lobe of the lip being smaller (sometimes very much smaller than the lateral lobes) and in the central tubercles of the crest being furnished with several smaller one on each side, a circumstance overlooked in the figure by Mr. (now Sir) W. Hooker, published in Collectanea.

47. ONCIDIUM BARBATUM L. O. p. 200. Coll. Bot. t. 27. F. p. 16:

(A.) *verum*. Sepals and petals cinnamon-brown. Middle lobe of lip very short and emarginate.

O. microglossum Klotzsch in Allg. Gartenztg. 1855. p. 234.

(B). *ciliatum*. Sepals and petals cinnamon-brown. Middle lobe of lip apiculate and as large as the side ones.

O. ciliatum LO. p. 200. B. R. t. 1660.

O. ciliatulum Hoffmgg. in Bot. Z. I. 834.

(C.) *limbatum*. Sepals and petals cinnamon-brown, spotted, with a clear yellow border. Centre of the lip very large, circular, and bright yellow.

(D.) *fimbriatum*. Sepals and petals dull brown. Middle lobe of lip larger than the laterals.

O. fimbriatum Hffmgg. l. c.

O. ciliolatum Id.?

O. subciliatum Id.?

With the assistance of Prof. Reichenbach I have been able to settle on a more satisfactory basis the limits of this difficult species. It is evident that it varies much in the magnitude and form of the middle lobe of the lip; and that the O. ciliatum of the „G. et Sp. O." is nothing more, than a variety of the O. barbatum figured by Sir W. Hooker, in the „Collectanea Botanica." Both have the five-lobed crest so common in the order, with an outlying tooth or two. The O. barbatum of „Paxt. Fl. Garden" is quite distinct, and has just been mentioned under O. trichodes. The varieties C and D, of which I have only seen single flowers kindly sent me by Mr. Rchb. require further examination, particularly C., especially as regards the condition of their crest. Copies of Hffgg.'s drawings, from the same invaluable correspondent, are my authority for the synonyms under D.

Wild in Tropical America; A. Brazil—Gardner, Swainson; B. Brazil—Hoffmannsegg, Luschnath; C. Guatemala—Rchb. f. in litt.; D. Brazil—Hoffmgg.

Lindl. B. Reg. XXIV. (1838.) sub 48: Common in the woods, which cover the low plains among the hills near Bananal. Brazil. Descourtilz.

Klotzsch in Berl. Allg. Gtz. 1855. p. 233: *Oncidium microglossum*:

Pseudobulbis suborbicularibus compressis utrinque unicostatis monophyllis; foliis ligulatis complicatis subcoriaceis rotundato-emarginatis leviter carinatis, basi attenuatis; scapo erecto paucifloro; bracteis ovatis acutis carinatis brevissimis; floribus flavis fusco-maculatis longipedicellatis; perigonii foliolis obovatis unguiculatis crispato-undulatis, interioribus latioribus, exterioribus lateralibus semiconnatis; labello inaequaliter tripartito, lobo medio minimo oblongo ligulato luteo subacuto, lateralibus magnis luteis patentibus brevi-obovatis obliquis, margine subundulato-crenatis sinubus suis anterioribus rotundatis fimbriatis, crista maculata multituberculato-cornuta; columnae alis latis emarginato-truncatis.

48. ONCIDIUM MICROPOGON Rchb. Bonpl. Ap. I. 1854. Xen. ined. Lindl. F. l. c. p. 16:

(A.) Flowers spotted with brown.

O. dentatum Klotzsch in Allg. Gartenztg. 1855. p. 234.

(B.) *chrysopterum* Rchb. fil. Flowers all yellow.

O. *macropetalum* Klotzsch in Allg. Gartenz. Sept. I. 1855.

Wild in — —

Certainly different from the preceding in its larger flowers, with the lateral sepals united fully half their length, and in the large flat obtuse petals, approaching in form those of O. macropetalum. For the synonyms I am indebted to Prof. Rchb. I have not seen a wild specimen.

O. micropogon Rchb. fil. Bonpl. II. p. 90:

Aff. O. barbato (quod ex intima cum O. ciliato affinitate et ipsis tepalis huc referendum): cristulae dentibus acutis nec fibrilligeris (quae optima O. barbati nota non reperitur in Icone Lindl. Coll. Bot. 27), alis infraapicilaribus, sepalo summo tepalis subaequali, lobo labelli medio dilatato.

Sepalum summum unguiculatum oblongum undulatum apiculatum, apiculo minuto corneo; sepala lateralia a basi unguiculata bipartita, partitionibus oblongis undulatis apicem versus pagina exteriori carinatis, carina in apiculum carnosum excurrente; tepala oblonga medium versus dilatata, acuta, undulata. Labellum tepalo inferiori duplo brevius, trifidum, segmenta lateralia ab angusta basi obtusangula rhombeo flabellata divaricata, segmentum medium sessile trilobum, lobuli laterales semirotundi fimbriati, lobulus medius ab angusta basi dilatatus, rotundatus, lobulosus. Callus baseos depresso tridentatus, brevis, dentibus antrorsis, medius in carinam productam utrinque bigibberosam excurrens. Gynostemium elatum, semiteres, utrinque sub apice abbreviate ac truncate alatum. Tabula infrastigmatica rhombea, producta, medio excavata. Hülle rothbraun. Säule und Lippe gelb, letztere am Grunde purpurfleckig. Blüthen $1\frac{1}{2}$—2mal so gross als die des O. barbatum. Von Hrn. Consul Schiller eingeführt.

Oncidium dentatum Klotzsch in Berl. Allg. Gartenz. 1855. p. 235:

Pseudobulbis oblongis compressis monophyllis; foliis angustis oblongis rigidis subtortuosis acutissimis, inferne conduplicatis attenuatis scapo brevioribus; racemo basilari paucifloro longe pedunculato; pedunculo filiformi rigido erecto e viridi-fuscescente; bracteis ovato-lanceolatis acutis tenuissime membranaceis parvis; floribus patentibus; perigonii foliolis obovatis, basi attenuatis undulatis brevissime hamato-apiculatis flavidis levissime viridi-maculatis, versus basin rubescentibus, interioribus latioribus, exterioribus lateralibus unguiculatis subduplo longioribus, basi connatis rectis divergentibus; labello columnaque luteo inaequaliter tripartito, lobis lateralibus majoribus orbiculato-obovatis, basi attenuatis retrorsum rectis sinubus suis latissimis dentatis, crista ochraceo-maculata quinquecornuta, cornubus duobus anticis et posticis lateralibus brevibus subacutis medio majore compresso, lobo medio abbreviato latissime reniformi-cordato, apice rotundato crenato; columnae alis angustissimis minutissime denticulatis.

„*Oncidium macropetalum* Lindl." Klotzsch in Berl. Allg. Gtz. 1855. p. 274:

Pseudobulbis ovatis compressis ancipitibus monophyllis, basi inaequaliter bifoliatis; foliis oblongis rigidis, dorso carinatis, basi brevi attenuato-conduplicatis, apice oblique recurvato-acutissimis scapo quintuplo brevioribus; racemo basilari longissime pedunculato 9—10-floro; bracteis lanceolatis acuminatis; floribus patentibus, ante anthesin longe rostratis; perigonii foliolis exterioribus elongatis undulatis cucullato-acuminatis flavidis fusco-purpureo-maculatis basi unguiculatis, inferioribus semiconnatis, interioribus brevioribus latissimis obovato-orbicularibus aureis emarginatis, inter lobos dente brevi recurvo instructis, basi subunguiculatis fusco-maculatis; labello inaequaliter tripartito, lobo medio minimo reniformi luteo apiculato, lateralibus majoribus orbiculato-spathulatis, disco orbiculari fusco-punctato plano dentato-ciliato, crista longitudinaliter obtuso-lamellata basi tri-, apice biloba tuberculis quibusdam interjectis; columnae flavidae alis parvis patentibus ovato-subtriangularibus.

Huc Regel Gtfl. S. 136.

49. ONCIDIUM MACROPETALUM Lindl. Sert. Orch. sub t. 48. L. F. p. 16:

(A.) Sepals and petals banded with brown; lateral lobes of lip very short and rounded; isthmus serrated.

(B.) *chrysopterum*. Sepals and petals much smaller, whole-coloured; lateral lobes of lip linear, obtuse, acinaciform; isthmus entire.

The general appearance of A is that of a thin, straggling specimen of O. flexuosum, the petals are nearly as large as the lip; the crest consists of three linear lobes, in front, then of a cluster of smaller papillae, and at the base of a middle ridge, with a broad plate on each side. B. is probably a distinct species; but I dare not establish it on the materials before me, consisting of a sketch and a bad dried specimen, with two half-decayed flowers. It is a smaller plant, the little panicle not bearing more than four or five flowers; the crest is unascertainable, but seems to consist inter alia of a pair of horn-like spreading tubercles. I am not even sure that the specimen from Bolivia and the sketch from Matto Grosso really belong to the same species; it is to the latter that the name is more particularly intended to attach.

Wild. A. in Brazil—Gardner, 4359. B. Matto Grosso—c. Weddell, Nr. 40; Bolivia, in the province of Chiquito's—hb. Weddell, 8476.

Huc: *Oncidium macropetalum* Lindl. l. c.:

Pseudobulbis ovatis compressis, foliis ligulatis acutis canaliculatis falcatis, panicula laxa erecta multiflora brevioribus, sepalis lineari-lanceolatis acuminatis, lateralibus semiconnatis, petalis obovatis rotundatis, labello fere aequalibus, labelli trilobi lacinia intermedia lunata, lateralibus rotundatis paulo brevioribus sinu serrato, crista basi trilamellata apice triloba tuberculis quibusdam interjectis, columnae alis linearibus obtusis. Brazil.

This is Mr. Gardners Nr. 4359. a spec. with much the habit of O. flexuosum. Lip and petals appear to be pure yellow, sepals spotted with brown.

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§ 5. Tetrapetala macropetala.

Analysis of the species.

Scapi foliis aequales
- Lab. unguic. crista serie longa duplici fimbriata . . . . 50. *Widgreni.*
- ,, ,, crista bicorni. . . . . 51. *cuneatum.*

Scapi foliis multo longiores
- Labellum integrum.
  - lamellis 4 acutis. Volubile . . . . 52. *acinaceum.*
  - crista transversa ! . . . . 53. *candidum.*
- Labellum trilobum.
  - lac. lat. linearibus elongatis.
    - sep. lat. acutissimis . . . . 54. *fimbriatum.*
    - ,, ,, unguic. obtusis . . . . 55. *cornigerum.*
  - lac. lat. auriculaeformibus.
    - Bracteae maximae spathaceae . . . . 56. *Warczewiczii.*
    - ,, minutae.
      - Lab. auriculae obsoletae . . . . 57. *Gardneri.*
      - ,, ,, manifestae.
        - crista inappendiculata divergenti-biloba (bicruris).
          - clinandr. crispo-marginatum.
            - petala retusa. Alae c. apicales . . . . 58. *amictum.*

petala acuta. Alae basilares . . . . 59. *tripterygium*.
clinandr. immarginatum, alae acinaciformes . . . . 60. *Forbesi*.
cristae verrucis circumstantibus rectilineis
Lab. subrotundum. Alae maximae . . . . 61. *crispum*.
„ cuneatum flabellatum quadrilobum . . . . . . 62. *pectorale*.
cristae verrucis circumstantibus gyratis . . . . 63. *curtum*.
— —
64. *haematochrysum*.

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50. ONCIDIUM WIDGRENI Lindl. F. p. 17:

O. racemo simplici erecto folio aequali, sepalo dorsali petalisque cuneatis retusis repandis lateralibus semiconnatis acutis, labello longe unguiculato secus unguem et ultra dentibus crebris biseriatis aucto, laciniis lateralibus linearibus incurvis intermedio cuneato bilobo, columnae alis pubescentibus obtusis falcatis.

Wild in Brazil; Minas Gerães—Widgren, 774.

Leaf solitary, three to four inches long, narrowly oblong. Raceme eight-flowered. Petals as large as the lip. This remarkable species can only be compared with the next.

51. ONCIDIUM CUNEATUM Scheidweiler in Allg. Gartenztg. 1842. 309. Bot. Reg. 1843. Misc. 15. L. F. p. 18:

It seems that this originally flowered in Germany with Count Aremberg: but it had been lost sight of until my friend the Chevalier Pinel re-discovered it. The flowers are dirty-white, in a small diffuse panicle, stained and spotted with purple, the column-wings are also purple. It is so like the last as to be easily mistaken for it, but, instead of a double fringe of teeth, the lip bears a pair of subulate recurved horns for the crest.

Wild in Brazil; on the summit of the Serra Morroqueimado, nowhere except upon cleared land where new sorts of ligneous plants have made their appearance—Pinel.

Huc: *Oncidium cuneatum* Scheidew. l. c. Lindl. l. c.:

Pseudobulbis subcylindricis, arcuatis, rugosis, apice truncatis, monophyllis; foliis lanceolatis acutis; paniculis radicalibus cernuis; sepalis lateralibus cuspidatis in unum cucullatum connatis, superiore truncato cucullato; petalis cuneatis apice minutissime crenulatis, labello trilobo, lobis lateralibus acutis, intermedio cuneato emarginato, crista triplici; posteriore quadridentata, intermedia lamellis 4 parallelis composita, columnae alis linearibus, denticulatis, recurvis, acutis.

Brasilia from Count Aremberg coll. A small species with white flowers spotted with crimson, and purple wings to the column. The leaves are 3'' and 6'' broad, the flower stalk 4'' long.

52. ONCIDIUM ACINACEUM Lindl. Sert. Orch. sub t. 48. L. F. p. 17.

I have now seen a dried specimen of this in the Hookerian Herbarium, but it adds little to the information formerly afforded by the drawing. The oval pseudobulbs bear three leaves. The scape is spotted with purple, straight for ten or eleven inches, when it becomes a twining raceme, of which about ten inches bearing flowers are present in the plant before me. The sepals are linear, retuse, white; the petals broad, obovate, violet bordered with white, the lip of the same colour, concave, streaked with crimson, having four collateral sharp-pointed lamellae. The anther downy; column furnished with two great acinaciform ears, terete at the base, with a pair of vertical quadrangular valve-like plates just below the stigma. No other species is much like this.

Wild in Peru; on trees in Chachapoyas—Matthews, 3186 in hb. Hooker.

Lindl. Sert. l. c.:

Pseudobulbis ovalibus 2—3phyllis, foliis oblongis basi angustatis, racemo volubili multo brevioribus patulis obtusis, petalis obovatis triplo majoribus reflexis, labello obovato emarginato repando ultra medium 4 lamellato, columnae alis maximis acinaciformibus.

Peru, on trees, flowered in April.

A drawing by Mr. Matthews exists in Sir W. Hookers Herbarium. It is a most remarkable plant, with pale lilac flowers, whose lip and column wings alone are stained with bright crimson. The stem is about 1½' foot long, or longer, the raceme itself of which half a dozen flowers only are shown, in the fig., twines round small sticks.

53. ONCIDIUM?? CANDIDUM Lindl. Cf. *Palumbinam* supra p. 699.

54. ONCIDIUM FIMBRIATUM L. O. p. 199. F. p. 18:

Wild in Brazil—hort. reg. Kew.

Known only from a drawing of a single flower, formerly seen by me in the portfolio of Francis Bauer. That drawing now forms no part of the Kew collection. The plant seems very near O. cornigerum.

55. ONCIDIUM CORNIGERUM L. O. 199. B. R. t. 1542. B. M. t. 3486. L. F. p. 18:

Flowers in a close panicle, yellow and brown. Column and anther downy. Anther-bed cucullate. Pseudobulbs always one-leaved.

Wild in Brazil—Miers; Rio—Gardner, 639; on trees above the Serra do Mar, and near Hytu, in the province of St. Paulo—Martius.

56. ONCIDIUM WARSZEWICZII Rchb. fil. in Bot. Ztg. 1852. p. 693! Lindl. F. p. 19:

Flowers as large as in O. maculosum, golden yellow, except the side of the middle lobe of the lip and the points of the crest. Raceme with from eight to twelve flowers. According to Rchb. fil. the bracts are very large and glumaceous, as long as the stalked ovaries; lower sepal with two acute lobes. Petals somewhat blunt. Lip scarcely unguiculate, rounded on either side, narrow, auriculate, then ligulate. Crest narrow, three-toothed in front, the lateral teeth turned outwards and prostrate, that in the middle a keel. Column long, with three-lobed column-wings, the upper lobe being ligulate, the lower oblong and crenulate. This exactly agrees with a flower given me by Prof. Reichenbach.

Wild in Costa Rica and Veragua, on Oaks at 8—10,000 ft. — Warscewicz. The thermometer stood at 41° Fahr. in November, and the plant perishes as soon as it descends into the warm zone. — Rchb.

Rchb. fil. l. c.:

Bracteis triangulis acutis, concavis, dorso carinatis, glumaceis, ovaria pedicellata aequantibus, perigonii phyllo summo lanceolato acuto crispulo basi curvato, infimo oblongo, labello breviori, apice bilobo, lobis acutis, phyllis lateralibus internis oblongis retusiusculis, quam summum triplo latioribus, labello basi vix unguiculato utrinque rotundato, angusto, ante basin utrinque antrorsum auriculato, deiu ligulato, apice in laminam reniformem bilobam dilatato, callo in media basi angusto antice tridentato, dentibus lateralibus extrorsis supinis, carina per medium, denticulo parvo utrinque in latere, gynostemio elongato, ad foveae stigmaticae latera alato, alis trilobis, lobulo summo ligulato, inferioribus oblongis, crenulatis.

Die Entdeckung zweier Oncidia mit grossen Deckblättern ist einer der interessantesten Funde des Reisenden. Diese Art hat etwas höchst abenteuerliches durch die Deckblätter und die seltsame Lippe. — „Trugknollen rundlich, zweischneidig." Blätter länglich, ziemlich dünn, etwa fusslang. Blüthenstengel sehr kräftig, stark, nach oben 3—5 enge, am freien Ende spitze, dürrhäutige Scheiden. Aehre 8—13blü-

thig. Blüthen so gross, wie die eines gutgezogenen Oncidium maculatum, ganz goldgelb, nur die Seite des Mittelstücks der Lippe und die Spitze der Schwielen purpurroth.

Veragua: Chiriqui Vulkan; Costarica: Carthago Vulkan. An Eichen. 8—10,000'. v. Wsewz.

57. ONCIDIUM GARDNERI Lindl. Lond. J. Bot. II. 662. p. 19:

Very near O. crispum and Forbesi, from which it differs in the form and tuberculation of the lip, and the very small column wings. Flowers moderately large, brown, with a yellow lip.

Wild in Brazil: on trees in the forests of the Organ Mountains—Gardner.

Huc Lindl. Lond. Journ. l. c. (1843):

Floribus paniculatis, sepalis oblongis obtusis lateralibus semiconnatis petalis duplo majoribus unguiculatis subrotundis undulatis, labello transverso emarginato basi auriculato, cristae tuberculis duobus a fronte maximis intermedio minore duobus a latere linearibus binis alteris basilaribus circularibus verrucisque quibusdam in medio, columnae alis nanis rotundatis.

Hab. — On trees in forests Nr. 642. Organ Mountain (first coll.). Brazil. Gardner.

This fine species allied to O. crispum and Forbesi, is distinctly separated by the peculiar from and tuberculation of the lip, and by the very small wings of the column. The leaves and pseudobulbs are unknown.

58. ONCIDIUM AMICTUM Lindl. B. R. 1847. t. 68. L. F. p. 19:

Flowers large, yellow and brown, very handsome; the middle lobe of lip transversely lozengè-shaped and bifid; anther-bed hairy, with a membranous frill; column-wings ciliated; crest of a pair of diverging lancet-shaped lobes in front, and two smaller at their back.

Wild in Brazil—Hort.

Cf. Walp. Ann. I. 788.

59. ONCIDIUM TRIPTERYGIUM Rchb. fil. in B. Z. 1852. p. 694. L. F. p. 19:

Flowers as large as in O. pectorale, golden yellow and brown. Dorsal sepal acuminate, lower with two acute lobes. Lip panduriform, with the basal lobes blunt and crisp, the middle one very large, subsessile and twolobed. Anther-bed with a membranous microscopically toothletted border. Crest of lip carinate, toothletted, rather muricated, with a pair of legs in front. — Rchb. fil.

Wild in Peru; near Loxa—Warscewicz.

Rchb. fil. l. c.:

Perigonii phyllo summo oblongo lanceolato acuto acuminato, infimo a cuneata basi oblongo, apice bilobo, lobis acutis, phyllis lateralibus internis oblongis acutiusculis, sessilibus, quam phyllum summum plus dimidio latioribus, labello panduraeformi, lobis lateralibus basilaribus obtusatis crispulis, lobo medio maximo subsessili, bilobo, lobis dilatatis rotundatis, gynostemio sat brevi, basi utrinque obtuse alato, superne aptero, cucullo membranaceo microscopice denticulato androclinium cingente, labello basi carinato, carina denticulata, antrorsum bicruri, muriculata.

Blüthen so gross, wie die des Oncidium pectorale, goldgelb und braun. Nur vergleichbar mit dem purpurfleckigen *O. cucullatum* Lindl. Dieses hat ganz kurze Hüllblätter, kleine Seitenlappen der Lippe, stark genagelten breiten Mittellappen derselben, eine aufrechtstehende, spitzliche Kappe, nach oben geschulterte, grundständige Säulenflügel. Loxa in Peru.

60. ONCIDIUM FORBESI Hooker Bot. Mag. t. 3705. L. F. p. 19:

A very fine plant resembling O. crispum, with large brown flowers broken up with yellow near the edges. Its sharp column-ears always banded with lines of violet are

characteristic. In general, the crest consists of five rugged equidistant warts $\begin{smallmatrix}0\\00\\000\end{smallmatrix}$, but the two middle ones are sometimes obsolete.

Wild in Brazil; Minas Gerâes—Widgren, 770; rare on trees in virgin forests of the Organ Mountains—Gardner, 5872.

Hook l. c.:

Pseudobulbis oblongis sulcatis compressis monophyllis, folio lanceolato coriaceo, scapo paniculato multifloro, sepalis recurvo-patentibus petalisque (duplo majoribus) obovatis undulatis subunguiculatis, labelli disco basi tuberculato-cristato lobis lateralibus parvis oblongis, intermedio maximo flabelliformi, columnae alis parvis angulatis.

Brazil. Organ Mountains, where it was discovered by Mr. Gardner in 1837, and whence it was sent by the same zealous collector to his distinguished patron, his Grace the Duke of Bedford at Woburn-Abbey. Named in compliment of the able Horticulturist, who is in charge of that noble collection.

Among the dried specimens there is only one of this species and that is marked „very rare" and is numbered 442 of the Organ Mount. Coll. In the Stove of Woburn it bloss. Oct. 38.

As a species it comes near O. crispum B. M. t. 3499, but the panicle is much larger bearing more copious flowers; these flowers are very differently coloured and marked: the crest and side lobes, and still more the column present also amply sufficient characters of distinction, the latter being considerably smaller, with very short, angled, by no means serrated wings.

Perigonium flavum marginibus brunneis.

Lindl. B. Reg. XXV. 1839. Misc. 149:

Pseudobulbis ovalibus sulcatis monophyllis, foliis lanceolatis coriaceis, scapo paniculato multifloro, sepalis oblongis obtusis unguiculatis, lateralibus semiconnatis, petalis obovatis duplo majoribus, labelli lobis lateralibus auriculaeformibus, intermedio maximo flabellato, cristae tuberculis 5 carnosis aequidistantibus, columnae alis parvis distantibus.

Brazil. — For a specimen I am indebted to James W. Buller Esq. of Downes near Exeter, who observes that it resembles O. crispum more than any of the species he has seen, but is much more beautiful, having petals gaily edged with bright yellow, and some of the sepals barred with the same colour. The plant has a large panicle and very gay appearance. I must however add, that I find the ground colour of the flowers very much browner, than in the figure in the Bot. Mag. in my copy, of which it is brick red. The bidentation of the wings of the column is a variable circumstance, but the appendages of the base of the lip are constantly as represented and described by Sir Wm. Hooker.

61. ONCIDIUM CRISPUM Lodd. Bot. C. t. 1854. L. O. p. 197. B. R. t. 1920. Bot. Mag. t. 3499. L. F. p. 20:

Flowers often fifty or sixty in a bending raceme, very large, deep brown, broken up with yellow near the centre. Crest three-lobed, ovate, acuminate, supported closely on either side by straight, smooth, terete warts. Flowers vary in diameter from one and a half to two inches.

Wild in Brazil; on the Organ Mountains on dead trees—Harrison.

62. ONCIDIUM PECTORALE Lindl. Sert. Orch. t. 39. L. F. p. 20:

Flowers very large, in an erect spreading panicle, with a brilliant deep yellow lip, and crimson stains on the yellow sepals and petals. Middle lobe of lip flabelliform, deeply two-lobed, with a very narrow base.

Wild in Brazil—Loddiges.

Lindl. l. c.:

Pseudobulbis ovatis compressis sulcatis diphyllis, foliis oblongis obtusis papyraceis, scapo a basi paniculato brevioribus, sepalis lateralibus semiconnatis petalisque obovatis majoribus undulatis, labelli lobis lateralibus nanis, intermedio maximo convexo undulato bilobo, crista ovata depressa acuminata margine verrucosa tuberculisque numerosis circumdata, columnae alae truncatis.

Imported from Rio Janeiro. Habit of O. Forbesii, leaves of flexuosum. Pseudobulbs at base and points leaved. Anther very developed. Arrangment of tubercles at the base of the lip is difficult to describe, and may be compared for general appearance to an old-fashioned ladies stomacher, studded with little knots; hence the name. — Flos luteus purpureo pictus.

63. ONCIDIUM CURTUM Lindl. in Bot. Reg. 1847. t. 68. L. F. p. 20:

Flowers large brown except the lower half of the lip and some bands on the sepals, which are yellow. The short white crop-eared column with a hairy anther and the lateral tubercles of the crest arranged in a somewhat circular manner, separate this species from all the preceding.

Wild probably in Brazil; its true origin unknown.

Cf. Walp. I. 788. — Lindl. l. c.: At first sight like O. crispum and Forbesii, but it is, in reality, near O. pectorale (the breast plate Oncid.). Differs:

1) Flowers are smaller.
2) There is more brown in sepals.
3) There is a broad brown border to the lip.
4) The space between the auricles and expanded part of the lip is very short, with parallel edges.
5) The auricles are broader.
6) The tubercles of the crest are much more broken up and differently arranged.
7) The anther is downy.
8) The lateral sepals united to the point.

64. ONCIDIUM HAEMATOCHRYSUM Rchb. in Linn. XXII. 844. (1849). L. F. p. 20:

Pedunculus gracilis superne furcatus (nunc pluriramosus?), partitione utraque pauciflora (3—5), sepala obovata acutiuscula, lateralibus connatis, apice bidentatis. Petala sepalo supremo subaequalia. Labellum panduratum, parte basilari quadratum, unguiculatum, auricula lanceolata, obtusiuscula in utroque angulo posteriore; crista crassa gyrosa, nunc in tres partes sulcis 2 transversis divisa; callis 4—6 minutis papillaribus in utroque latere, parte mediana labelli constricta, antica transversa rotundata, antice biloba, lobo utroque nunc bi- trilobulato; columnae alae subquadratae, margine externo denticulatae. — Such is the more important part of description given by Rchb. fil. I have seen no specimen or sketch. Flowers handsome, golden yellow and crimson, with the exception of the column-wings. I can't distinguish it from O. curtum.

Wild in Brazil; near Rio Janeiro, whence it was sent to Count Hoffmannsegg, with whom it bloomed in 1841. — Rchb. fil.

Obs. *O. ochmatochilum* Rchb. fil. conf. ex Lindl.

64 b. ONCIDIUM FLABELLIFERUM Pinel Paxt. Mag. XVI. ad pag. 65. cf. Walp. Ann III. 555.

Huc: *Oncidium flabelliferum* Pinel MSS. Paxt. Mag. XVI. p. 66:

Plant an epiphyte. Pseudobulbs two inches or more long, having from one — 3 leaves at the extremity of each. Leaves erect, lanceolate. Flower scape one foot to eighteen inches long, many flowered. Sepals and petals ovate lanceolate rounded, wavy at the edges, thickly spotted and striped with purplish brown; much after the manner of the flowers of Oncid. tigrinum. Labellum large, spreading, fan-

shaped, curled at the margins, twolobed, of a bright yellow colour, thickly spotted on the lower margin with purple brown.

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§. 6. Tetrapetala micropetala. Lindl. l. c.

Analysis of the species.

Labellum indivisum
  ovatum emarginatum . . . . 65. *concolor.*
  obovatum acutum . . . . 66. *cochleatum.*
  cuneatum rotundatum; alis c. maximis laceris . . . . 67. *aureum.*
Labellum panduratum.
  scapus uniflorus . . . . 68. *decipiens.*
    „ racemosus v. paniculatus.
    Crista paucituberculata (verrucis segregatis e).
      clinandrium cucullatum vel manifeste marginatum.
        crista ecornuta parva . . . . 69. *cucullatum.*
          „ bicornis . . . . 70. *pubes.*
      clinandrium immarginatum.
        crista unicornis . . . . 71. *unicorne.*
          „ mutica.
          Lab. lob. med. lin. spath. acutus . . . . 72. *incurvum.*
            „ „ „ reniformis.
            Racemus simplex; crista utrinque digitata . . . . 73. *bifolium.*
            Panicula,
              ramosa diffusa cristae dentibus 5 . . . . 74. *Martianum.*
              angusta racemosa crist. papill. acervatis . . . . . 75. *maculosum.*
    Crista verrucituberculata (dentibus aliquot segregatis).
      Flores racemosi.
        sepalis lateralibus basi tantum connatis . . . . 76. *Blancheti.*
          „ „ semiconnatis . . . . 77. *viperinum.*
      Flores paniculati.
        crista simplici convexa antice tridentata . . . . 78. *disciferum.*
          „ multiplici.
          Labellii lobus medius sessilis quadrilobus . . . . . 79. *varicosum.*
            „ „ „ unguiculatus.
            C. alis rotundatis, crista multifida . . . . 80. *isopterum.*
              „ ovatis fornicatis, crista basi convexa pulverea 81. *flexuosum.*
              82. *haematoxanthum.*

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65. ONCIDIUM CONCOLOR Hooker in Bot. Mag. t. 3752. L. F. p. 21.:
Cyrtochilum citrinum Hooker in B. M. t. 4454.
Oncid. unguiculatum Klotzsch in Allg. Gartenz. XVII. 91.

This is one of the handsomest of the genus, on account of its large rich whole-coloured yellow flowers, by which and its ovate retuse lip it is immediately recognised. Its origin is doubtful. On the authority of the Woburn collection Sir W. Hooker reported it to have been found on the Organ Mountains by Gardner; at a later period Central America was given to it upon the assurance of Mrs. Lawrence's gardener. Neither source of information is trustworthy. I have seen nothing like it in the multitudes of wild specimens that have passed under my observation. In a

memorandum in my herbarium Mr. Bateman reports, that it exists in the Royal Berlin Collection, Nr. 4049, where is a specimen gathered in Brazil by Sellow.

Wild in Brazil; Mexico? — Klotzsch.

Hook. B. M. 3757: *Oncidium concolor* Hook.

Bulbo ovato, foliis binis ligulato-lanceolatis, scapo radicali racemoso, sepalis lateralibus fere ad medium unitis, labello trilobo basi bilamellato lobo medio bifido.

Brasilia. Flores flavissimi.

Lindl. Sert. 48: pseudobulbo ovato diphyllo, foliis ligulato lanceolatis racemo erecto brevioribus, sepalis petalisque lanceolatis conformibus, lateralibus semiconnatis, labello unguiculato ovato obtuso emarginato medio constricto basi bilamellato longiore, columnae alis rectis truncatis.

Brazil. Colour pure yellow, without any spots.

Hook. B. M. 4458: *Cyrtochilum citrinum:*

Pseudobulbis brevibus ovatis sulcatis apice diphyllis, foliis lineari-oblongis acutiusculis, scapo radicali foliis multo longioribus, racemo simplici 8 — 10floro, bracteis parvis ovato-lanceolatis acuminatis, labello subduplo brevioribus, petalis ovatis subundulatis sepala subaequantibus, labello maximo subrotundo panduraeformi basi attenuato bilamellato, columna utrinque unidentata.

Habit of *Cyrtochilum filipes* B. R. 4159. (*Oncid. Wrayae* Hook. Bot. Mag. 3854.)
Central-America.

Obs. Synonymon: *Oncid. unguiculatum* Klotzsch false huc ducitur. Est ipsissimum *Oncid. unguiculatum* Lindl. quod = *O. Barkeri* Lindl., quod = *O. tigrinum* Llav. — R. f.

66. ONCIDIUM COCHLEATUM Lindl. Sert. Orch. sub t. 25. L. F. p. 21:

Of this I have only seen a flower-stem with half-a-dozen densely packed flowers, less than an inch in diameter.

Wild in Peru; Paramo de Suraguru—Jamieson.

Lindl. l. c.:

Pseudobulbis foliisque —, bracteis oblongis membranaceis obtusis, floribus densis, sepalis lateralibus semiconnatis petalisque lanceolatis acutis conformibus et concoloribus, labello unguiculato concavo obovato acuto basi bilamellato tuberculo parvo infra medium tribusque denticulis interjectis, columnae alis angustis bifidis inflexis.

Paramo de Suraguru. Quito. Jamieson.

67. ONCIDIUM AUREUM Lindl. Sert. Orch. sub t. 25. L. F. p. 22:

Odontoglossum festatum Rchb. fil. in Bonpl., Ap. 1854.

(A.) Lip as broad as long. Crest of two vertical plates, emarginate in the middle with an intermediate equidistant teeth.

(B). *stenochilum.* Lip longer, than broad. Crest of two vertical plates, emarginate in the middle, with an intermediate tooth.

Odont. hemichrysum Rchb. fil. in Bonpl. Ap. 15. 1854.

Bracts glumaceous. Flowers one inch and a half apart, in an erect, loose, stiff panicle; apparently with a golden yellow lip, and olive-coloured sepals. The plant must be in cultivation, good healthy specimens having been sold by Mr. Stevens in 1853. The differences in the crest and form of lip between the two varieties are very remarkable.

Wild in Peru: A. high mountains near Andimarca—Mathews, 1068; B. sources of the Marannon—Warscewicz.

Lindl. Sert. l. c.:

Pseudobulbis — —, foliis binis lanceolatis acuminatis obtusis, scapo

paniculato ramis flexuosis, bracteis magnis membranaceis spathaceis, sepalis lateralibus semiconnatis petalisque ovatis acutis, labello cordato cuneato rotundato unguiculato, margine unguis utraque bidentata setulis 5 interjectis, alis columnae acinaciformibus laceris.

In montes altos prope Andimarcam. Matthews 1068.

Sert. 48: Flowers apparently with yellow lip and green sepals and petals. Lofty mountains of Andimarcha.

Huc: *Oncidium (Xanthoglossum) festatum* Rchb. fil. v. Warscew. in Bpl. II. 100:

Aff. O. bicolori sepalis lateralibus ima basi connatis, labello cordato pandurato. — Pedunculus racemosus seu subpaniculatus, nunc superne flexuosus, bracteae ovatae acutae cucullatae ovaria pedicellata dimidio seu tertia parte aequantes, sepalum summum oblongum apiculatum (undulatum ex sicco), sepala lateralia subaequalia basi connata, tepala sepalo dorsali subaequalia, labellum breviter unguiculatum, dein a cordata basi panduratum, portio anterior postica duplo latior, antice lobulata medio apiculata, discus subvelutinus, carinulae serrato dentatae 3—5 (dentibus 3—5) in ungue ac laminae basi, gynostemium humile, alae lineares, descendentes, apice ciliatae.

Blüthen zwei Mal so gross, als die des O. mystacinum. Hüllblätter rothbraun. Lippe goldgelb. [Wir hielten diese Art früher für *Odontoglossum bicolor* Lindl., allein dieses hat ein labellum unguiculatum basi cuneatum, auch ist von verwachsenen seitlichen Sepalen keine Rede. Palca in Peru. Ruiz and Pavon 1794.

67b. Judice Rchb. fil.: ONCIDIUM HEMICHRYSUM Rchb. fil. Mss.: (*Odontoglossum (Xanthoglossum) hemichrysum* Rchb. fil. Warzw. Bonpl. II. 100:

Aff. Od. mystacino sepalis lateralibus semiconnatis, lamellis 2 in ungue, tribus abbreviatis in basi laminae antepositis, lateralibus bilobis, gynostemii brevissimi alis apicilaribus ligulatis fimbriatis.

Racemus gracilis, nunc ramosus, bracteae ovatae acutae seu lanceolatae acutae ovarium pedicellatum sub anthesi dimidio seu tertia imo quinta parte aequantes, sepalum dorsale oblongum acutum apiculatum, lateralia subaequalia, apiculata, dimidium usque connata, ;labello supposita; labellum unguiculatum a cordata basi panduratum, apice latius, quam basi, apice bilobum; lamellae 2 pronae in ungue, cristulae minutae antepositae adjectis 2 denticulis utrinque, nervi 3 medii (in sicco!) satis prominuli, gynostemium humile, alae apicilares, ligulatae productae, fimbriatae (toto margine anteriori). Hüllblätter rothbraun, Lippe goldgelb. Pseudobulben zweiblättrig, Blätter schmalzungig nach Skizze, kürzer als Blüthenstiel. Peru. v. Warscewicz. Nächst *O. mystacinum* Lindl., Rchb. fil. Diese Art hat eine längere Säule, kürzere Flügel, eine anders gestaltete Lippe und ganz gelbe Blüthen.

(68. ONCIDIUM DECIPIENS Lindl. cf. *Oncidium crista galli* Rchb. fil. N. 96.)

69. ONCDIUM CUCULLATUM Lindl. Sert. sub 21. L. F. p. 22:

(A.) *maculosum*. Raceme many-flowered, nodding. Lip violet spotted with purple, with small auricles. Sepals and petals deep-red.

(B.) *sanguinolentum*. Raceme few-flowered. Lip rose-colour, crenulated, spotted with crimson, with auricles wider than the middle lobe. Sepals and petals green, with a few crimson streaks.

Leochilus sanguinolentus Lindl. in Bot. Reg. 1844, Misc. 91.

(C.) *spathulatum*. Raceme many-flowered, nodding. Lip spotted only at the base, which is narrower, than the middle lobe. Sepals and petals spotted.

(D.) *nubigenum*. Raceme few-flowered, erect. Lip narrow at the base, with a lobed and nearly sessile middle division, without spots, as well as the sepals and petals.

O. nubigenum LO. p. 197.

(E.) *macrochilum.* Raceme many-flowered, very flexuose. Lip whole-coloured, one inch and a half broad.

A most variable plant, of which D. is, I now doubt not, merely an alpine form, in which the crest consists of three rounded tubercles; in C. the tubercles are acute, and there are two minute additional teeth on each side; in B. there are three tubercles, the middle one of which is very small, and the laterals abruptly rostrate; in A. there are three only, and acute; in all there is a tuft of hairs at the foot of the column, on the crest. The leaves are equally changeable; in A. they vary from oblong to narrowly lorate, and in C. they are spathulate. In the colour and size of the flowers differences are equally abundant. All are very handsome, most especially E., which is by far the finest Alpine Orchid yet discovered.

Wild in Peru and New-Granada; A. in the province of Mariquita, in the forests of Quindiu, at the height of 870, where it is called Hierba Buenal and La Mesa-Linden, 1287; trunks of trees on the western declivity of Pichincha—Jamieson; Soto. at 6000 to 7500 ft. — Schlim, 1004; las Velas, at 10,000 ft.—Schlim, 1726; Soto, Ocanna, etc. at 7500 to 9000 ft. on the Sierra Nevada of Sa. Martha—Schlim, 411; Sa. Martha—Purdie; B. La Guayra—Barker; C. Peru—Wm. Lobb; D. Woods of Machache near Quito, at 11,000 ft. — Hartweg; ridge of Assuay, but only on the W. side, which to a certain height is clothed with forest trees, at 11,000 ft. — Jamieson; E. Quitinian Andes, on trunks of trees, at 13,000 ft. — Jamieson.

Huc: *Oncidium cucullatum* Lindl. Sert. sub 21:

Pseudobulbis foliisque —, scapo paniculato angulato bracteis squamiformibus cartilagineis concavis acutis sepalo supremo oblongo, inferioribus omnino connatis petalisque ovalibus carnosis planis, labello cordato panduriformi apice maximo lunato transverso appendice lanceolata apiculato, tuberculo baseos ovato subtridentato, columna nana basi auriculis rotundatis marginata, clinandrio cucullato.

In arboribus ascensus occid. montis Pichinchae. Jamieson.

Sert. sub 48: Flowers apparently purple with small spots.

Orch. Lind. p. 14: „An epiphyte with oval obtuse ribbed pseudobulbs. This magnificent species has deep red petals and a twolobed violet lip spotted with purple. Forests of Quindiu, 7800 – 8700'. The Gallegos call it Herba buenal and la Mesa. Nr. 1287.

Huc: *Leochilus sanguinolentus* Lindl. Bot. Reg. XXX. 1840. Misc. 91:

Labello pandurato sepalis multo majore apice bilobo, laciniis subrotundis imbricatis superficie plana laevi supra basin 3-tuberculata basi ipsa villosa, columnae alis abbreviatis, clinandrii dorso elevato, anthera parva.

This also comes from La Guayra, whence Mr. Barker received it. Although the flowers are small, they are very beautiful, having a deep crimson lip, richly studded with clear purple spots. In the smallness of its anthers, the extension of the anther bed behind into an elevated rim, and in the shortness of the column wings, it is somewhat different from the rest of the genus. I have only seen a couple of flowers.

Huc: *Oncidium cucullatum* Lindl. Paxt. Fl. G. III. t. 87:

Pseudobulbis ovalibus obtusis costatis elongatis, foliis oblongo lanceolatis planis scapo angulato aequalibus, racemo simplici vix paniculato, bracteis parvis concavis squamaeformibus, sepalo supremo petalisque ovalibus, subherbaceis aequalibus, lateribus in unum oblongum concavum bidentatum connatis, labello cordato panduriformi apice dilatato bilobo laciniis rotundatis subdentatis divaricatis lamellis brevibus laevibus rotundatis pone basin serie solitaria villosam, columna nana auriculis brevibus rotundatis juxta basin marginata, clinandrio carnoso cucullato.

O. cucullatum Lindl. Sert. sub 21. Orch. Lind.
Leochilus sanguinolentus B. R. 1844. Misc. 91.

First knowledge we had of it in a live state was from a couple of wretched flowers sent us by the late M. Barker, when it was supposed to be a Leochilus.

O. nubigenum Lindl. in Hook B. J. I. 13. 14. (1834): Found August 1831 on the ridge of Assuay, growing upon the trunks of decayed trees; most commonly a single leaf springing from the bulb, but occasionally 2. The scape bears from 3—10 flowers of pale purple colour. „Of all the Orch. I have seen, this species is, perhaps, the one that occurs at the highest elevation, rarely descending below 14000 feet" Prof. William Jamieson.

Rchb. fil. Bonpl. III. 66. Ocanna 6—7000'. Wagener. Rchb. l. c. II. 279: Ocanna. Wälder. 8—10,000'. Januar. 411. Schlim. Lem. Jard. Fl. III. t. 317. Van Houtte Fl. Serres VIII. 835.

70. ONCIDIUM PUBES LO. 199. B. R. t. 1007. B. M. t. 8926. L. F. p. 23:
O. bicornutum Bot. Mag. t. 3109.

Flowers small, in a pyramidal panicle, brown, edged, with yellow, or chiefly yellow with crimson streaks and stains.

Wild in Brazil; in thin forests round the table-land of Bom Jesus de Bananal—Descourtilz; Miers.

Hue: *Oncidium bicornutum* Hook. l. c.:

Bulbo elongato diphyllo, scapo radicali, panicula densa, perianthio tetraphyllo foliolis obovatis subaequalibus, labello angulato-lobato lateribus apiceque reflexis, disco tuberculato, columna pubescente, anthera cornubus duobus mollibus reflexis.

Mr. Harrison Esq. of Rio sent it to his sister Mrs. Arnold Harrison of Aigburgh, near Liverpool. — Perigonium flavum, purpureo maculatum.

Hook. Bot Mag. l. c. 39267. *Oncid. pubes* Lindl. var. *flavescens*: Different as the flowers of this plant appear at first sight from those of Oncidium pubes as figured in the Bot. Reg. they exhibit the same form and structure. The dissimilitarity exists only in colour, and I have the authority of Dr. Lindley himself for considering it specifically the same. The original species has the sepals of a much greener tinge and the middle lobe of the lip margined with red. — A native of Brazil first detected there by Mr. Douglas, and since found in the Organ mountains by Gardner, whose flowering plant, grown in the Glasgow Bot. Gard., is here represented. 1839/10.

71. ONCIDIUM UNICORNE Lindl. B. R. 1839. Misc. 76. L. F. p. 23:
O. monoceras Hooker Bot. Mag. t. 3109.

Panicle thin, straggling. Flowers small, pale yellow.
Wild in Brazil; Minas Geraës—Regnell.

Lindl. l. c.:

Pseudobulbis ovalibus compressis diphyllis, foliis oblongo-linearibus recurvis, racemo composito ramis divaricatis rectiusculis, sepalis lateralibus in unum concavum emarginatum connatis, petalis obovatis undulatis, labelli lobis lateralibus nanis intermedioque emarginato rotundatis, disco basi transverse elevato antice cornu ascendente compresso subfalcato acuto, alis columnae angustis obsoletis.

This is a pretty little species, with a compound straggling raceme of pale yellow flowers. The singular horn on the lip, to which it owes its name of the „Unicorn" at once distinguishes it from all species previously described. Messrs. Rollisons imported it from Rio.

Hook. l. c. 3169:

Pseudobulbo oblongo compresso sulcato uni- — bifolio, foliis oblongo-lanceolatis coriaceis nitidis, floribus paniculatis, sepalis (viridibus)

lanceolatis inferioribus coadunatis, petalis obovato-spathulatis, labello trilobo, disco cornu elongato sursum curvato, columna gracili elongata aptera.

Sent by Mr. Hunt from Rio Janeiro to his Grace the Duke of Bedford Sept. 39. Flowered 1840(1.)

We know another horned species, which flowered at Glasgow in the autumn of last year, sent from the Organ Mountains by Mr. Gardner, which has a horn very similar to this: but it is in other respects very different, especially in the presence of 2 blunt, horn-shaped processes on the column.

Etiam in Knowles and Westc. Floral Cab. II. 1838. p. 143.

72. ONCIDIUM INCURVUM Barker in Bot. Reg. Misc. 174, 1845, t. 64. L. F. l. c. p. 23: *O. alboviolaceum* Rich. and Gal., Orch. Mex.

Flowers small for the genus, white banded with purple, sweet-scented, much like those of O. ornithorhynchum.

Wild in Mexico; Talea in the province of Oaxaca, at 4—5000 ft. very rare — Galeotti, 5021.

Lindl. l. c.:

Pseudobulbis ovatis ancipitibus utrinque tricostatis diphyllis, foliis ensiformibus acutis, scapo elongato racemoso-paniculato, sepalis lineari-lanceolatis undulatis liberis, petalis conformibus incurvis, labelli laciniis lateralibus rotundatis nanis intermedia subrotunda concava acuta, crista ovato depressa dimidio inferiore lineata superiore tricostata, columna subaptera.

A pretty species with pale pink flowers mottled with white. It has at first sight the appearance of O. ornithorhynchum, but it wants the birds beaked anther and the column-wings of that species. Its panicled scape is long, narrow, and about 3' high. Barker and Lee & Comp. of Hammersmith.

O. albo-violaceum Rich. et Gal. tab. 33. Ann. sc. nat. 1845. p. 27:

Pseudobulbis compressis oblongis sulcatis diphyllis, foliis lanceolatis acutis; scapo paniculato; floribus albis violaceo-maculatis, gynostemio hinc et illinc bialato, alis latis, truncatis, sinuosis. Mexico.

73. ONCIDIUM BIFOLIUM Sims in Bot. Mag. t. 1491. B. C. t. 1845. L. O. p. 197. L. F. p. 23:

This appears to be one of the plants brought to Montevideo by Indians from the country to the northward, and used in that city for the decoration of balconies; with its precise habitat I am unacquainted. Flowers large, yellow, with rich brown bars on the sepals and petals. Raceme nodding, 8—10-flowered.

Wild near Montevideo—hort.

74. ONCIDIUM MARTIANUM Lindl. in B. Reg. sub t. 1920. L. F. p. 23:

(A.) Flowers whole-coloured.

(B.) *bicolor*. Sepals and petals and base of lip spotted with brown. *O. bicolor* Bot. Reg. t. 66. 1843.

The two varieties differ only in colour; both have bright yellow flowers, almost white at the back. They form, when vigorous, a great branching panicle. The lateral sepals are joined at the base, but only for a short distance. The figure of bicolor in the „B. R." is from a poor weak specimen; the two elevated lines below the middle tooth of the crest are not sufficiently elevated or tooth-like at the base.

Wild in Brazil; woods in the province of Mines—Martius.

Lindl. l. c.:

Pseudobulbo —, foliis —, sapo erecto paniculato, sepalo supremo petalisque obovatis obtusis concavis lateralibus linearibus acutis brevioribus, labello bilobo reniformi, laciniis lateralibus rotundatis nanis, crista falcata compressa utrinque tuberculis 3-linearibus, $^{2}/_{1}$-suffulta, alis columnae denticulatis subquadratis angulis rotundatis.

In Brazil. Von Martius.

A beautiful yellow species with a scape 2 feet high; it resembles in general appearance O. ampliatum. B. R. XXIII. 1837. sub 1920.

β. bicolor Lindl. Bot. Reg. XXIX. 66:

Pseudobulbis ovalibus compressissimis utrinque tricostatis, folio solitario oblongo sessili striato, panicula divaricata, sepalis lateralibus basi connatis petalisque ovatis acutis, labello maximo bilobo, disci tuberculo hastato tripartito, columnae alis rotundatis dentatis.

Spanish Main. Loddiges Cat. 1243. Flowered 1842. Sept. Affinity O. bifolium. Perigonium sulphureum purpureo pictum labello extus albo.

Lindl. Orchid. Lind. p. 14: „not in herb. Linden."

75. ONCIDIUM MACULOSUM Lindl. in Bot. Reg. sub t. 1920. L. F. p. 24:

Leaves two, lanceolate, four to five inches long. Scape nearly two feet high, with a small, somewhat panicled raceme. Lip about an inch broad.

Wild in Brazil; in the province of Mines—Martius.

Descriptio Lindleyi: Pseudobulbis ovalibus compressis, foliis lanceolatis acutis, scapo stricto maculoso apice paniculato, sepalis ovalibus acutis reflexis, lateralibus basi connatis, petalis oblongis obtusis, labello maximo basi pubescente obsolete quadrilobo reniformi, laciniis lateralibus minimis auriculaeformibus, crista oblonga e tuberculis pluribus digitiformibus constante, columnae alis inferioribus truncatis, superioribus falcatis integerrimis majoribus.

Brazil. Von Martius.

A fine spec. in the way of Oncidium bifolium.

Lindl. Sert. 48: In the way of Oncidium bifolium, but with an erect slightly branched raceme. It has flowered with Mr. Barker of Birmingham.

76. ONCIDIUM BLANCHETI Rchb. fil. in Linnaea XXII. 1845. L. F. p. 24:

A grass-leaved plant, with a close cylindrical erect raceme of small flowers. Bracts somewhat glumaceous, not more than one line and a half asunder. The crest consists of five excessively rugged tortuous lines near the base, as many shorter and broad-ended ones of the same character in front, and a couple of little tubercles at a short distance on each side.

Wild in Brazil; Bahia—Blanchet, 3343, (f. Rchb.); Minas Gerães—Widgren, 772.

Cf. Walp. Ann. III. 555.

77. ONCIDIUM VIPERINUM LO. p. 197. L. F. p. 24:

O. confragosum Lindl. in Bot. Reg. 1838. Misc. 92.

Lip much smaller, than in O. bifolium, and the crest quite different. Flowers pale straw-colour. Misled by Garden inaccuracy I was led to make out of this another species, O. confragosum, falsely said to be Mexican.

Hook. B. J. I. 13: Lindl.: Another species was accidently mixed up with the Peruvian Orchideae, and therefore, we insert it from Mrs. Lindley's MSS. in a note:

O. vip. Diagn. sequitur = LO. 107. „Gen. et Sp. Orch. part. 3 ined."

Only found on the back of very old trees and requires more nourishment than any of the other species. Paraguay. Mr. Tweedie.'

Oncidium confragosum Lindl. B. R. XXIV. (1838.) Misc. 92:

Pseudobulbosum, scapo simplici glaucescente apice nutante, sepalis ovatis acuminatis undulatis lateralibus semiconnatis, petalis majoribus oblongis undulatis acutis, labelli lobis lateralibus nanis recurvis intermedio unguiculato alte bilobo subangulato reniformi disco maximo digitato confragoso, columnae alis rotundatis denticulatis.

A nat. of Mexico, imp. George Barker, Esq. Flowers just the same colour as O. stramineum, for which the spec. might be mistaken upon a casual examination. The colour is a very delicate straw, faintly spotted with pale purple.

78. **ONCIDIUM DISCIFERUM** Lindl. Fol. p. 24:

O. folio oblongo apiculato, scapo a basi paniculato panicula pyramidali, sepalo inferiore bilobo, petalis obovatis acutis, labelli lobo medio subrotundo-reniformi apiculato lateralibus semicircularibus, crista oblonga discoidea dentibus 3 antepositis aliisque minutis circumstantibus, columnae alis minutis triangulis obtusis sub lente pruinosis.

Whole plant a foot high. Pseudobulbs oblong, ribbed. Flowers apparently with a yellow lip, and olive-green whole-coloured sepals and petals.

Wild in Bolivia—Bridges.

79. **ONCIDIUM VARICOSUM** Lindl. in Bot. Reg. sub 1920. Journ. of Hort. Soc., V. 143. Lindl. F. sub p. 24:

A glaucous strong-growing species, of considerable beauty. The leaves are firm and ligulate-lanceolate. The scapes, which are strong, very glaucous, and about three feet long, have a great branching panicle, loaded with from eighty to ninety large showy flowers. The sepals and petals are pale dull green banded with dull brown. The lip is large, very bright yellow, with two ovate lateral ears somewhat crenate in front, and a four-lobed middle lobe. The crest consists of two triple teeth, one standing before the other, and of a little ring of varicose veins placed on each side of it. The wings of the column are oblong, whole coloured, and finely notched.

Wild in Brazil—Prince Max. of Wied Neuwied in hb. Martius.

Lindl. B. R. l. c.:

Pseudobulbis subtetragonis diphyllis, foliis rigidis spathulato-lanceolatis, scapo gracili pyramidali subsimpliciter racemoso brevioribus, floribus distantibus petalis sepalisque quorum lateralia semiconnata acutis reflexis, labello maximo subrotundo obsolete quadrilobo, lobis lateralibus rotundatis crista postice tridentatis fornicata antice cuneata varicibus venarum in posticis confluentibus circumdata, alis superioribus columnae rotundatis denticulatis, inferioribus integerrimis.

Brazil, Prince Maximilian of Wied Neuwied. — A fine species in the way of O. bifolium, but with large spreading compuned racemes.

Sert. sub 48: alis columnae rotundatis denticulatis. Flowers appear wholecoloured. — G. Chronicle 1850. 168: = *Oncidium Lunaeanum.*

Lindl. Paxt. I. 106 Lindl. Journ. et Hort. soc. V. 143: Scapes covered with a glaucous bloom. Flowers bright yellow. Considerable beauty. Leaves firm, ligulate lanceolate; scape strong, about 3 feet long. panicle with 80—90 large flowers. Sepals and petals are pale dull green banded with dull brown. Lip is large, very bright yellow, with 2 ovate lateral ears, somewhat crenate in front, and 4 lobed centra portion. Crest consists of 2 triple teeth one standing before the other, and of a little ring of varicose veins, placed on each side. Wings of column are oblong, whole coloured, finely notched.

Lemaire Jard. Fl. tab. 206. 207.

80. **ONCIDIUM ISOPTERUM** Lindl. in Bot. Reg. sub t. 1920. L. F. p. 25:

This should be re-examined. My sketch of the original specimen represents a plant with two recurved chanelled leaves about three inches long, a scape about five inches long, where it forks into two unequal flexuose racemes. The flowers are very like those of O. flexuosum, except in the crest, which seems to be formed of one great central tooth and several smaller ones on each side, without any pulverulent cushion at the base. The sepals are acute, not obtuse, and the wings of the column which are rounded, as in O. flexuosum, are of nearly the same size as the two cheeks at the base of the column, which are themselves, in the original definition, called additional wings.

Lindl. ex Bot. Reg.:

Pseudobulbis ovalibus compressis diphyllis, foliis angustis canaliculatis recurvis scapo apice paniculato flexuoso quadruplo brevioribus, sepalis acutis supremo fornicato, lateralibus semiconnatis divaricatis, petalis obovatis reflexis, labelli laciniis lateralibus brevibus angustis obtusis intermedia transversa angulata biloba, crista tuberculosa, columnae alis 4 subaequalibus rotundatis.

Brazil. Von Martius.

A small species very near O. flexuosum.

Sert. Orch. 48: Inhabits elevated open places on the Serra de Gran Mogol.

81. ONCIDIUM FLEXUOSUM Sims in B. M. t. 2203. LO. p. 199. L. F. p. 25.

Flowers bright yellow with clear brown spots, in a large branching panicle. It varies much in the size of the flowers, and also in the condition of the crest, which is, however, always cushion-shaped and downy or pulverulent at the base. In front of the cushion are sometimes three small ridges, in other cases four teeth are interposed between them and the cushion; in others there are a few off-lying warts. I have never meth with the ridges fingered as represented in the „Bot. Mag."

Wild in Brazil—Miers, 3479. etc.

Oncidium flexuosum Lodd. β. *citrinum* Rgl. Index Semin. Petrop. 1855.

Labellum sulphureum immaculatum. Cetera ut genuini.

82. ONCIDIUM HAEMATOXANTHUM Rchb. fil. in litt. L. F. p. 25:

Under this name I have from Prof. Rchb. a sketch of the flowers of a species said to be near O. flexuosum, but by no means the same. The flowers seem to be the size of O. isopterum, but the middle lobe of the lip is almost sessile; the base „purplish with yellow calli."

82b. ONCIDIUM ECHINATUM H. B. Kth. N. Gen. et Sp. I. 3445. 79. Huc: *Erycina echinata* Lindl. Fol. I. Jan. 6. 1853:

Sepala subherbacea, aequalia patentia, lateralibus basi connatis. Petala omnino conformia. Labellum maximum, petaloideum, tripartitum, circa columnae basin adnatum; laciniis aequalibus, auricula carnosa inter columnam sinumque utrumque; basi appendice bilingui auctum. Columna nana, semiteres, brachio carnoso (staminodiis) utrinque; rostello elongato sigmoideo. Pollinia 2, subrotunda, postice excavata; caudicula lineari subulata; glandula ovali. Anthera membranacea, unilocularis, longe rostrata. Herba epiphyta, Americae tropicae, ebulbis. Folia pauca, radicalia, disticha, coriacea, acuta. Panicula terminalis, racemosa; bracteis squarrosis, amplexicaulibus. Ovaria ramentaceo-echinata.

Excellent specimens of this extremely rare plant, with which I have been favoured by M. Galeotti, show, what has long been suspected, that it is not an Oncidium; from which genus it is separated by its dwarf column, long sigmoid rostellum, and the very large fleshy column-arms, which evidently represent the lateral inner abortive stamina of Zygostates, and the two arms of Leochilus. It differs from the former genus in the column-arms not being free, in its large peculiar lip, and its minute petals; from Leochilus in its long sigmoid rostellum, and peculiar lip, and from Ornithocephalus, to which it approaches, in the remarkable arms of the column, and two pollenmasses instead of four. The lip has the following unusual structure; it grows nearly round the column, and adheres to all that it surrounds; at the base next the column stands on either side a little fleshy ear, which arises from within the edge of the lip, and a similar, but smaller, ear is produced within and above each anterior sinus of the lip. The analogy of these intermediate ears is not obvious.

Ericyna echinata Lindl. F. p. 1:

The figure in H. B. K. is tolerably characteristic, as a general representation. My specimens are about nine inches high, with leaves like those of Ionopsis utricula-

rioides. The scape is polished like a bamboo; the bracts are completely amplexicaul, with diverging acute points. The lobes of the lip, which resembles that of Tetramicra, are rounded and entire. The whole plant has the aspect of an Ionopsis.

Wild in Mexico; on the west coast near Acapulco, in the hottest region, flowering in May—Humboldt and Bonpland; at the Laguna de Tututepeque, in the province of Oaxaca, at the elevation of 4000 feet, in April—Galeotti, 5359.

82 c. ONCIDIUM MACRANTHERUM Hook. B. Mag. 3845:

Pumilum pseudobulbis ovatis compressis monophyllis, pedunculis subtrifloris folio brevioribus, petalis sepalisque ellipticis conformibus, labello ovali apice emarginato lateribus deflexis disco elevato pubescente basi bituberculato, columna brevi basi utrinque longe calcarata, rostello producto, anthera (magna) ovato-acuminata.

Perigonium flavido viridulum, labello purpureo picto; perigonii phyllis basi purpureis; labelli callis flavis.

Interior of Mexico. Galeotti. Sent by Parkinson to the Woburn coll. April 1840.

It may rank near O. pumilum.

Lindl. Bot. Reg. XXVII. 1841. Misc. 33:

This plant possesses no beauty, even when represented upon paper. It is either a bad specimen of Leochilus oncidioides of Knowles and Westcott, or a species so nearly allied, that I am not at present able to point out the diff. between them. With Oncid. carinatum and another species or two it forms a group readily known by Oncidium proper, by the large anther, the two armed column, and some peculiarities in the lip. If it should be eventually separated from Oncidium which seems probable, the name of Leochilus although not very appropriate, must be retained for it.

Huc: *Leochilus* Knowles and Westcott Fl. Cab. II. 1838. 143:

Perianthium connivens, sepala lateralia basi connata, petala conformia, labellum columna continuum integerrimum, columna nana basi alata, gynizus subquadratus, clinandrium marginatum, rostratum, pollinia 2 globosa, cavata, anthera unilocularis. Caudicula linearis. Glandula minuta.

Very nearly related to Oncidium particularly to O. carinatum from which it principally differs in having smooth, not a tuberculated or crested labell. It is a native of Mexico, and is in the collection of G. Barker.

Bot. Reg. XXVIII. 1842. Misc. 22:

In many respects it is extremely like Rodriguezia, and its habit is not at variance with that genus, but there are some circumstances that distinguish it. In the first place, the lip is not parallel with the column, and secondly the two arms of the column proceed from below the stigma and not from the upper edge of that organ. In addition to this the anther is disproportionally large as compared with the column, and there is a honey pore near the base of the lip. From Oncidium this genus is well distinguished by the position of the arms of the short column, and the honey pore.

B. R. XXVI. 40. Misc. 218. *Rodriguezia maculata* Lindl.:

Racemis nutantibus basi laxe et distanter vaginatis, sepalo supremo cum petalis acuto lateralibus basi tantum connatis paulo breviore, labello oblongo convexo retuso secus axin depresso infra medium crista pubescente utrinque elongata aucto basi 4-dentato, columna brevi utrinque brachium protrudente.

Guatemala. Skinner. Bateman.

Small flowers, faintly spotted with red, and has no beauty.

B. R. 1842. Misc. 22: *Leochilus oncidioides* Knowles and Westcott.

Rodr. mac. Lindl. B. R. 1840. Misc. 18. *Oncid. macranth.* Hook. B. Mag. 3845.

Racemis nutantibus foliis subaequalibus basi laxe et distanter vagi-

natis, sepalis lateralibus basi tantum connatis, labello oblongo convexo retuso vel apice angustato rotundato secus axin depresso, infra medium crista pubescente utrinque elongata aucto basi mellifero.

Mexico and Guatemala.

Flowers spotted with purple on a dirty transparent ground.

82 d. ONCIDIUM LABIATUM Rchb. fil. Mss. Huc *Epidendrum labiatum* Sw. Ind. occ..... *Leochilus cochlearis* Lindl. Bot. Reg. 1842. Misc. 22. (*Rodriguezia cochlearis* Lindl. Ann. nat. Hist IV. 116):

Foliis oblongis sessilibus horizontalibus, racemo erecto radicali subcorymboso paucifloro duplo brevioribus, sepalo supremo cum petalis obtuso, lateralibus acutis semiconnatis breviore, labello obovato cochleari obtuso basi crista hippocrepica utrinque elongata bicarinato.

Dominica.

Flowers apparently yellow.

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§. 7. Pentapetala macropetala L. F. 26.

Analysis of the species.

Pedunculus uniflorus. Caulis volubilis pseudobulbifer . . . . . 83. *scansor.*
„ paniculatus
Rostellum muticum.
Alae columnae carnosae triangulares . . . . 84. *sarcodes.*
„ „ membranaceae.
crista triloba convexa verrucis segregatis.
labelli basis obtuse triangularis . . . . 85. *excavatum.*
„ „ circularis . . . . 86. *polyadenium.*
crista multiplex.
labelli lobus intermedius acutus alte cordatus . . . . . 87. *cardiochilum.*
„ „ „ emarginatus
sepala lateralia linearia, labellum angustum . . . . . . 88. *tricolor.*
„ „ spathulata
alae columnae obsoletae . . . . 89. *pictum.*
„ „ expansae
clinandr. dorso appendiculatum . . . . 90. *ampliatum.*
clinandr. nudum.
heterantha, labello bilobo . . . . 91. *Jamiesoni.*
homoeantha
labellum reniforme . . . . 92. *formosissimum.*
„ bilobum
petala basi latiora.
c. alae max. acinaciformes lobatae . . . . 93. *leopardinum.*
c. alae subrotundae emarginatae . . . . . 94. *hieroglyphicum.*
petala spathulata . . . . 95. *obryzatum.*
Rostellum subulatum.
Labellum sexlobum crispum, petalis sepalisque parvis acutis . . 96. *Crista galli.*
„ quadrilobum basi latius.
col. alae lineares elongatae divergenti-bilobae . . . . . . 97. *Chrysopyramis.*
„ „ latae cuneatae angulis productis . . . . 98. *pyramidale.*
labellum trilobum basi angustius. c. al. max. inaeq. 2-lob. . . 99. *lancifolium.*

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83. ONCIDIUM SCANSOR Rchb. fil. in Linn. XXII. 844 ! L. F. p. 26:

O. convolvulaceum Lindl. in Paxt. Fl. Garden, Vol. I. under t. 21.

This has the twining stem of a Convolvulus. Flowers solitary, two inches in diameter, with a large yellow lip.

Wild in New-Grenada—Warscewicz; near Ocanna, at the height of 5400 ft.—Schl., 1013; Venezuela—Fünck and Schlim, 1444.

Cf. Walp. Ann. III. 555. — *Oncidium convolvulaceum* Lindl. Paxt. Fl. G. I. 102:

Rhizomate volubili filiformi, pseudobulbis secus rhizoma distantibus compressis subrotundis monophyllis, folio plano sessili ovato oblongo obtuso mucronulato, pedunculis basi squamatis unifloris folio subaequalibus, sepalis liberis petalisque latioribus oblongis acutis patentissimis, labello maximo bilobo baseos auriculis linearibus apice dilatatis, rotundatis, crista elevata truncata utrinque lobata verrucis duabus a fronte, columnae alis acutis truncatis.

Venezuela 1444. Funck and Schlim. Habit of Bolbophyllum agreeing in that with O. serpens. On a hard twining rhizoma appear at the distance of 3 — 4 inches oneleaved pseudobulbs usually springing from the axil of a small leaf. These pseudobulbs are thin, nearly round, scarcely an inch long, and each bear a solitary flat leaf about 2 inches long. Flowers nearly 2 inches in diameter, grow singly on peduncles scarcely longer than the leaves.

84. ONCIDIUM SARCODES Lindl. in Journ. Hort. Soc., XIV. 260. L. F. p. 26.

O. Rigbyanum Paxt. Mag., Oct. 1849.

The habit is that of O. pubes and amictum. Flowers large, bright yellow blotched with brown-red. Column white with blood-red, fleshy, truncated wings.

Wild in Brazil, according to Garden authority.

Cf. Walp. Ann. III. 556. — *Oncidium Rigbyanum* Hort. Paxt. l. c.:

Pseudobulbs something cylindrical, 3 inches long. Leaves 2—3 on the summit of each pseudobulb, erect, lanceolate. Flowers paniculate. Scape one foot long. Sepals and petals bright lemon yellow, var. in the centre of each, with numerous dark brown spots. Labellum large spreading, twolobed, somewhat curved at the edges, bright yellow, spotted with dark green.

85. ONCIDIUM EXCAVATUM Lindl. in Sert. Orch. sub t. 25. B. R. 1839. Misc. 150. Paxt. Fl. Gard. I. t. 21. L. F. p. 27:

(B.) *aurosum*. Flowers deep brown in the middle. Crest very rugose, with a thin vertical plate interposed between the front lateral ridges.

O. aurosum Rchb. fil. in Bonpl. Mai 1. 1854.

Flowers bright yellow with brown stains near the base of the lobes. The crest is very convex, excavated in front, studded with small white tubercles, has a decurrent lamella from either side of the base, a small toothed ridge, and a pair of outlying teeth on each side. *O. aurosum* Rchb. can hardly be distinguished from O. excavatum. The crest is certainly rather different, and the flowers perhaps larger and more compactly arranged.

Wild in Peru; Chachapoyas — Mathews in hb. Hooker; sources of the Marannon— Warscewicz.

O. excavatum Lindl. Sert. 25:

Pseudobulbis foliisque ligulatis, scapo paniculato, bracteis squamiformibus membranaceis acutis, sepalis lateralibus obovatis obtusis liberis supremo concavo acuto, petalis membranaceis oblongis retusis basi angustatis, labello sessili pandurato apice rotundato emarginato sellaeformi basi cordato convexo fornicatim excavato, columnae alis retusis rotundatis.

Peruv. prov. Chachapoyas Matthews.

Lindl. Sert. sub 48: Pale yellow flowers spotted with brown, and is easily known by the base of the labellum being very convex, a little hollowed out in front, and excavated with a deep pit on the under side.

Lindl. Bot. Reg. XXV. 1839. Misc. 150: Peruvian plant; flowered with Loddiges. Yellow flowers, spotted with brown, and is easily known by the base of the labellum being very convex, a little hollowed out in front, and excavated with a deep pit on the under side. The petals and lower sepals are much more acute, than in my wild specimens from Chachapoyas, and it is probable, that the specif. charact. will require modifications.

85 b. ONCIDIUM AUROSUM Rchb. fil. v. Warscew. Bonpl. II. 108:

Aff. O. sarcodi labelli pandurati angulis medianis lateralibus introrsis acutis, callo quadrato-rhombeo.

Panicula robusta, pedalis et ultra. Rami ascendentes, flexuosi, polyanthi, bracteae triangulae acutae, ovaria pedicellata florida decima-quinta parte aequantes. Sepala obovata cuneata, apice plus minus rotundata seu (summum praesertim) retusa, nunc imposito apiculo; tepala a basi late cuneata flabellata apice retusiusculo obtusangula nunc apiculata, paulo longiora, apice duplo latiora, labellum a basi cordata medium versus latere subcrenulato angustatum, subito expansum sub angulis insilientibus in laminam transversam basi labelli plus duplo latiorem, antice nunc lobulatam, medio sinuatam; tabula carnosa utroque latere rhombea vertice pleiotuberculata laevi in basi; gynostemium humile, alae subquadratae seu dolabriformes retusae integrae apicilares, tabula infrastigmatica utrinque linea arcuata limbata. Eine schöne goldblüthige Art; die Hüllblätter sind auf der untern Hälfte rothbraun gefleckt. Es liegen uns grössere und kleinere Blüthen vor: die grössten mögen denen des *Oncidium sarcodes* Lindl. (*Rigbyanum* Paxt.) gleichkommen. Diesem steht unser O. aurosum wohl am nächsten, allein dasselbe ist durch rundliche Trugknollen, Lippengestalt (dort sind die einspringenden Buchten der Lippe gerundet und kurz), feinbehaarten zweilappigen Buckel u. s. w. gut verschieden. Peru. v. Warscewicz.

86. ONCIDIUM POLYADENIUM L. F. p. 27:

O. panicula contracta pyramidali, petalis sepalisque retusis, labello basi circulari undulato denticulato lobo medio subrotundo bilobo latiore, crista convexa seriatim verruculosa antice excavata lamellis 4 anticis denticulatis decurrentibus, verrucis pluribus segregatis, columnae alis obliquis obtusis subemarginatis.

Living plants were sold for Mr. Veitch at one of Mr. Stevens's sales in 1847, and the species is probably in cultivation. In a dried state it resembles O. excavatum, but the flowers are larger, apparently whole-coloured, in a close pyramidal panicle. The large circular base of the lip, numerous outlying lateral teeth, and five rows of little tubercles on the convexity of the crest abundantly distinguish it.

Wild in Peru—W. Lobb.

87. ONCIDIUM CARDIOCHILUM L. F. l. c. p. 27:

O. panicula ramosissima intricata divaricata, sepalis petalisque acuminatis, labelli pandurati lobis lateralibus cordatis convexis rotundatis, intermedio parum latiore reniformi-cordato acuto, crista carinata utrinque tridactyla, col. alis obsoletis buccis convexis elongatis.

A fine species, with a singularly entangled branching divaricating panicle. Flowers as large as in O. rupestre or Odontoglossum hastilabium. The Guatemala form has a much thinner panicle, but does not seem to be different otherwise.

Wild in New-Grenada—Purdie; Guatemala—Skinner.

88. ONCIDIUM IRICOLOR Rchb. fil. in Bonpl. I. 1854. Lindl. Fol. l. c. p. 27:

Seen in cultivation in the garden of Mr. Frege. Said to differ from all others in having a four-toothed velvety crest and a whitish-lilac colour. The crest is further

described as being oblong, notched on each side, and two-toothed at the end, hence appearing four-toothed. In one place, Mr. Reichenbach calls the column-wings triangular and obtuse; in another rectangular, entire, and divaricating. The only flower I have seen, and an accompanying sketch, has extremely narrow sepals and a peculiarly thin texture. Is it not an accidental form of O. incurvum, with free sepals?

Wild in — —

Rchb. fil. Bonpl. II. p. 91:

(Pentasepala macrotepala): ab omnibus recedit callo basilari velutino quadridentato, alis triangulis obtusis; colore albolilacino.

Panicula laxa. Sepala linearilanceolata acuta, lateralia sibi approximata; tepala duplo latiora, basi unguiculata, acuta, undulata, labellum basi rhombea antrorsum angustatum, apice dilatatum, subquadratum, lateribus externis grosse crenulatum, antice medio sinuato cum apiculo interjecto minuto, callus sericeovelutinus oblongus in basi, utrinque excisus, apice bidentatus (hinc quadrilobus); gynostemium prope rectum, androclinium descendens, processus rostellaris parvus dentiformis, tabula infrastigmatica utrinque medio obtusangula, disco excavata, alae rectangulae obtusae, integerrimae, divaricatae. Von Herrn Kammerrath Frege.

99. ONCIDIUM PICTUM HBK., I. t. 81. LO. p. 201. L. F. p. 28:

A species with a fine large pyramidal panicle of yellow flowers. It certainly belongs here, and not to the pluritubercnlate set.

Wild in the temperate parts of Popayan, at the height of 3240 ft. — HBK.; Peru—Matthews, 1920.

Sert. sub 48: Differs from Oncidium altissimum in its more compact panicle, large flowers, obsolete antherwings, apparently in the much less spotted flowers.

90. ONCIDIUM AMPLIATUM LO. p. 202. B. R. t. 1699. L. F. l. c. p. 28:

There are two varieties in cultivation, differing only in the size of the flowers. Panicle ample. Flowers yellow, much paler at the back than in the front. The crest at the back of the anther-bed is remarkable.

Wild in Central-America; Cuming, 1312; Costa Rica, on the shore in the gulf of Nicaya, also Nicaragua and Escaintla, in a climate the maximum of which is 85° — Skinner; Sa. Martha—Purdie; Columbia—Sinclair; Chagres—Fendler.

Pl. Hartw. II. p. 193: Escuentla Mexici Hartweg.

Lindl. Bot. Reg. 1835. XX. 1699:

Sepalis omnibus liberis, labello bilobo subrotundo transverso; laciniis brevissimis, callo baseos 5-lobo, lobis lateralibus patentissimis planis truncatis, intermediis teretibus centrali compresso, alis columnae cuneatis, dentatis, reflexis, pseudobulbis subrotundis compressis, foliis planis oblongo-lanceolatis, scapo erecto apice ramoso.

Folia et pseudobulbus facie omnino O. papilionis. Scapus adscendens, radicalis, $1\frac{1}{2}$ — 2 pedalis, apice ramosus. Flores lutei, labelli dorso albo.

Sert. sub 48: Pseudobulbis subrotundis ancipitibus rugosis maculatis diphyllis, foliis oblongis coriaceis planis subundulatis scapo paniculato brévioribus. Panama et Guatemala. A noble species of which there are 2 var. one much larger, than the other. According to Mr. Skinner it is from Costa R.

Lindl. in Hook B. Journ. 1834. I. p. 7: Panama et Columbia occid. Cuming 1312.

Bot. Reg. XXVI. Misc. 97: Costa Rica; found on the sea shore in the Gulf of Nicaya; since found throughout the coasts of Nicaragua and also in the Escuintla 15 leagues from Guatemala climat. 80°. — 85°.

Bonpl. II. 13. Rchb. fil.: „Barquisimito.“ Caracas. Wagener.

91. ONCIDIUM JAMIESONI Lindl. in Paxt. Fl. Gard., I. under t. 21. L. F. p. 28:

Flowers yellow, with a brown base to the petals, a few imperfect ones mixed with the others—the only case of the kind in the present group.

Wild in Peru; Quito—Jamieson.

Lindl. l. c.:

Pseudobulbo —, folio carinato complicato, panicula effusa ramulis divaricatis, floribus heteromorphis pluribus abortientibus, sepalis linearibus obtusis rectis, petalis duplo latioribus oblongis obtusis subundulatis, labello auriculato apice semicirculari bilobo, cristae tuberculis 5 parvis, duabus lateralibus patentissimis caeteris subparallelis intermedio productiore, columnae alis oblongis erectis rotundatis.

Quito Peruviae.

Yellow flowers having broken bands at the base of petals and nowhere else. Wings of column are not unlike a bat's ears. Jamieson.

92. ONCIDIUM FORMOSISSIMUM Rchb. fil. in Bot. Ztg. 1852. p. 691! L. F. p. 28:

Sepals and petals dark purple, upper half yellow; lip wholly yellow. Petals four times as large as sepals, quite sessile. Lip very large; its lateral lobes oblong, two-lobed, small; the middle one very broad, unguiculate, reniform, or rather crescent-shaped. Crest small with five collateral equal downy round tubercles, in front of which is a thin three-lobed arched membrane. Column-wings very large, hatchet-shaped, with the angles rounded. This is one of the finest of the genus. It differs from O. Jamiesoni in its uniform flowers, which are much larger, with far larger column-wings.

Wild in Peru; Loxa—Warscewicz; Andes of Quito—Jamieson.

Rchb. fil. l. c.:

Perigonii phyllis externis oblongis obtusiusculis, basi subcuneatis, abbreviatis, phyllis lateralibus internis oblongis acutiusculis ima basi subcuneatis, quadruplo majoribus, labelli maximi lobis lateralibus oblongis obtusis bilobis divaricatis parvis, lobo medio latissimo unguiculato reniformi, medio acuto, callo baseos cristaeformi, parvo, plurituberculato, gynostemii recurvati alis maximis, oblongis, microscopice crenulatis, androclinium apice libero triangulo longe excedentibus, alulis minutissimis coriaceis suppositis.

Hüllblätter schwarzpurpurn, die vordere Hälfte goldgelb, Lippe ganz gelb. Loxa.

Rchb. l. c.: Diese Art hat zwar mit *O. cultratum* Lindl. Aehnlichkeit wegen fast eben so vertheilter Farbe, allein sie ist sehr verschieden. Die Blätter sind häutig: die Hüllblätter höchst ungleich, ohne gefärbte Nerven, die Lippe beiderseits am Grund öhrig-gelappt, in der Mitte eng verschmälert, plötzlich sehr erweitert.

(93. ONCIDIUM LEOPARDINUM Lindl. l. c. p. 28 = O. tigratum Rchb. fil. N. 129.)

94. ONCIDIUM HIEROGLYPHICUM Rchb. in Allg. Gartenztg., Sept. 2. 1854. L. F. p. 28

Wild in Peru—Warscewicz.

Related, but not very nearly, to O. excavatum. Lip flat, deeply two-lobed. Space below the stigma three-chambered at the upper end. Crest velvety. Column-wings small and two-lobed, the upper lobe small and passing into the larger. Rchb., who examined a living specimen in the garden of Senator Jenisch of Hamburgh.—„Pseudobulbis caespitosis ovalibus laevibus disciformibus monophyllis; foliis papyraceis oblongis acutis undulatis brevibus; racemo simplici; bracteis lanceolatis acuminatis; perigonii foliolis subreflexis undulatis sordide fusco-maculatis apicem versus flavidis, sepalis brevi unguiculatis, petalis sessilibus subduplo latioribus; labello trilobo, lobo medio latissimo flavido profunde bilobo undulato, lateralibus oblongo-obovatis horizontalibus erectis schaeformibus, crista septemgibba minutissime puberula; c. alis brevibus sub-emarginatis." — Klotzsch in Allg. Gartenztg. 16. Sept. 1854, mutatis mutandis. The three cavities on the column beneath the stigma are remarkable. I have seen a solitary flower and a sketch from Mr. Rchb.

Rchb. fil. in Otto und Dietrich Allgem. Gartenztg. N. 35. 1854. p. 274:

Affine (cui tamen haud proprius accedit) Oncidio excavato Lindl.!

labello plano profunde bilobo, tabula infrastigmatica apice (sub fovea) tricamerata, callo velutino, auriculis parvis bilobulis, lobulo superiori minuto in lobulum majorem transeunte.

Sepala ac tepala latiora margine minute undulata lanceolata, flava, apicibus exceptis dense et confluenter maculata. Labellum basi utrinque humerato ac rotunde lobatum dein ac ungue angusto in lobum medium basi sublatiorem reniformem dilatatum, apice profunde bilobum, lobo altero alteri oblique imposito, flavum, unguis basi brunnea; callus velutinus inter lobos basilares depressus utrinque bilobus, lobis serrulatis, apice rostratus, auriculae extrorsa utrinque sub rostro. Gynostemium curvatum, fovea limbata; auriculae sub vertice obtuse bilobae, lobo inferiori majori; tabula infrastigmatica antrorsum obtusangula sub stigmate trifoveolata carinulis 2 interjectis. Rostellum obtusum. — Pseudobulbi plani, argute ancipites.

Rchb. fil. Bonpl. III. 215: Pseudobulbus anceps, humeratus, ovatus. Folia ligulata obtuse acuta 4,5'' longa, medio 2'' lata. (Nach dem lebenden Original in Hrn. Senator Jenisch's Garten.)

95. ONCIDIUM OBRYZATUM Rchb. fil. in Bonpl., Mai 1, 1854. L. F. l. c. p. 29:

This seems to have the habit of O. excavatum, but the flowers are rather smaller. Its very narrow obtuse spathulate unguiculate sepals are remarkable. The crest of the lip consists of a downy middle keel, two broad thin teeth on either side its point, and a small wart at the base of each of these.

Wild in Peru—Warscewicz.

Rchb. fil. l. c.:

Aff. O. Jamiesoni labelli callo basilari carinato velutino, utrinque papuloso anteposilis carinulis ternis falcatis, alis angustis apice longe acuto falcatis.

Panicula compacta, rami ramulosi flexuosi, bracteae lanceae acuminatae ovariis pedicellatis multo breviores, flores illis Oncidii Wentworthiani aequales, sepala a basi lineari spatulata, obtusiuscula, tepala subaequalia, duplo—triplo latiora, labellum basi reniforme, dein in unguem linearem subito contractum pro parte anteriori hastato reniformi, crenato, apice exciso sinuata; duplo latiori, quam parte basilari; carina basilaris velutina, utrinque papulosa, antepositae carinulae ternae falcatae; regio circa callum in sicca planta velutina; gynostemium breve; regio stigmatica duas tertias occupans; stigma angustum; dens rostellaris parvus, deflexus, alae angustae dolabriformes, longae, basi obtusatae, extus denticulatae, apice longe acuto falcatae; tabula infrastigmatica brevissima, pandurata. Wahrscheinlich steht unsre Pflanze nächst *O. Jamiesoni* Lindl.; dieses hat nur 5 Lippenschwielen und runde Säulenöhrchen. Blüthen gelb, unterer Theil der Tepala und der Lippe braun gefleckt. Peru. v. Warscewicz.

96. ONCIDIUM CRISTA GALLI Rchb. fil. in Bot. Zeit. 1852. p. 697. L. F. p. 29:

Lip very large in proportion to the small, acute, flat sepals and petals, its whole margin crisp, the middle lobe very broad, stalked, four-lobed, the lateral lobes rounded, those in front ligulate and parallel! — Rchb. I have only seen a sketch of this, which appears to be a very distinct species.

Wild in Peru—Warscewicz; Jürgensen 646, fide Rchb. in litt.

Rchb. fil. in Bpl:

Perigonii phyllis externis lanceolatis acutis, lateralibus internis oblongis acutis crispulis triplo latioribus, labello maximo sexlobo, ima basi humerato, toto margine subtiliter crispulo, lobis posticis oblongocuneatis, lobo medio latissimo unguiculato, quadrilobo, lobis lateralibus rotundatis, anticis ligulatis, parallelis, crista longitudinali carinata lobulata in media basi ad unguem lobi medii transgrediente, cristulis minutis, carinatis adjectis, columnae alis dolabriformibus subintegerrimis, rostello ac anthera ornithorrhynchis.

O. iridifolium „folia nunc explanata" Lindl. B. R. 1911 ?

O. an *iridifolium* Galeotti Herb. 5289. Blätter lineallanzettlich, spitz, sechs, zweizeilig unter dem flachen, niederen, ganz kleinen Trugknollen, welcher ein entwickeltes und ein verkümmertes Athmungsorgan trägt. Alle sind etwa 2'' lang. Die Blüthenstiele schlank, Stiel rund, 2'' hoch, vierblüthig. Deckblätter dreieckig, spitz, am Grunde geöhrt. Blüthen so gross, wie die eines grossblüthigen O. iridifolium. Oaxaca. Galeotti.

Huc *Oncidium decipiens* Lindl. Fol. p. 22. N. 68:

Oncidium iridifolium Lindl. in Bot. Reg. t. 1911.

Very much like O. iridifolium (no. 28.) from which it differs in having flat leaves, a crest of five flat rounded plates instead of a deep middle tooth with concave appendages on each side, and an additional toothlet on the outer edge; in the petals being very small, not as long as the side lobes of the lip, and in the wings of the column being merely eroded, not coarsely toothed.

Wild in Mexiko; near Oaxaca at 3000 ft.—Galeotti, 5289; Guatemala — Skinner in hb. Hooker.

97. ONCIDIUM CHRYSOPYRAMIS Rchb. fil. in Bonpl. May I. 1854. L. F. p. 29:

Near O. pyramidale (Rchb.) — from which it differs in having much smaller flowers, a thinner and weaker panicle, and very narrow deeply two-lobed column wings, whose halves curve away from each other.

Wild in New-Grenada and the Western Cordillera—Warscewicz.

Huc Rchb. Warscew. l. c. II. 108:

Aff. O. pyramidali labello basi latiori quam antice, carinulis linearibus in basi bis ternis, media posteriori apice trifida, alis divergenti bifidis.

Pseudobulbi oblongi angusti ancipites monophylli, folia a basi cuneata lineariligulata (pollicem lata) acutiuscula (-5pollices longa); panicula elongata (-bipedalis), brachyclada (-4pollices), ramorum flexuosorum ramuli abbreviati, fractiflexi, basilares 3—5flori; bracteae triangulae acutae ovariis pedicellatis ultra quinquies breviores; flores aurei illis Oncidii ornithorrhynchi paulo minores, sepalum dorsale ovatum cuneatum, sepala lateralia oblonga cuneata aliquid longiora, tepala ovata supra basin subito et brevissime cuneata, labellum a basi brevissime ac late unguiculata margine basilari postico et antice reniforme, antice medio angustatum in unguem latum lobi mediani divergenti bilobulati obtusanguli parti suprabasilari haud aequali, carinula linearis antice tridentata parva in basi, adjecta utrinque lineola divergens, praepositae lineolae ternae carinatae, gynostemium recurvatum, androclinium valde subulatum ornithorrhynchum, alae lineares, apice utrinque falcatae, falcula superiori vulgo bidentata, tabula infrastigmatica rotundata valde protrusa. Neben *Oncidium pyramidale* Lindl.! Dieses ist (abgesehen von gefleckter, grösserer Blüthe) verschieden durch grössere, unten breitere Pseudobulbi, breitere Blätter, eine Lippe, deren Grund schmäler, als Vorderstück, deren Mittelstück viel breiter ist; deren Leistensystem einen ganz andern Plan zeigt; eine weniger keck zurückgebogene Säule mit einfachen linealen Flügeln; eine über dem Grunde viel stärker abgesetzte Tabula infrastigmatica. Neu-Granada: West-Cordilleren. v. Warscewicz. — So unbedeutend die einzelnen Blüthen sind, so muss die gut cultivirte Pflanze einen prachtvollen Eindruck machen.

98. ONCIDIUM PYRAMIDALE Lindl. in Ann. Nat. Hist., XV. 384. L. F. p. 29:

Scape six inches long. Panicle nearly a foot more, not more than four inches wide, with stiff lateral zigzag branches, each bearing six or seven flowers on average. Its broad terminal wedge-shaped two-lobed column-wings are very remarkable.

Wild in Peru; near Pasto, in the woods of Meneses, on trees—Hartweg.

Lindl. l. c.:

Pseudobulbis ovatis ancipitibus 2—3 phyllis, foliis oblongis tenuibus basi angustatis scapo erecto rigido paniculato pyramidali multo brevioribus, sepalis obtusis liberis dorsali ovali, lateralibus linearibus, pe-

talis duplo latioribus ovatis obtusis; labelli lobis lateralibus amplexicaulibus, intermedio bilobo latioribus, crista antice excavata processubus 7 (?) linearibus anticis longioribus, columna nana alis verticalibus lineari cuneatis sublobatis, rostello subulato.

Pasto (Hartw.) woods of Menesco.

Near O. excavatum, but with the rostellum of O. ornithorrhynchum. Scape a foot and a half heigh.

99. ONCIDIUM LANCIFOLIUM Lindl. in Plant. Hartw. p. 151. L. F. p. 29:

This is very much like O. pyramidale, from which it is distinguished by its column-wings being lateral, not terminal, and by its crest consisting of five nearly equal spreading fingers. The definition of the crest in the „Pl. Hartweg." is, owing to some inexplicable accident, wholly erroneous.

Wild in Peru; Cordillera near Loxa-Hartweg.

Lindl. l. c. (1844):

Pseudobulbis oblongis compressis, foliis lanceolatis acutis, scapo stricto apice paniculato brevioribus, ramis valde flexuosis, sepalis linearibus obtusis, petalis obovatis subundulatis duplo latioribus, labelli basi obcuneati lobo intermedio transverso bilobo, cristae tuberculis plurimis carnosis ramentaceis, columnae recurvantis basi biauris, alis maximis acinaciformibus subserratis undulatis.

Folia semipedalia. Scapus cum floribus pedalis; panicula compacta, rigida, flores verosimiliter lutei, purpureo fusco versus medium variegati.

In Cordillera prope Loxa.

Paxt. Fl. G. I. 104: „Leaves 6 inches. Scape about 6 inches. Panicle oblong, close, not quite so long. Flowers small, apparently yellow speckled with purple."

Lindl. Fol. p. 30:

O. fasciferum Rchb., will be found among the Plurituberculata.

O. sessile Lindl., has the petals so little different in size from the sepals, that it is better stationed in the Paucituberculata.

O. stenopetalum, Klotzsch in Allg. Gartenztg. Sept. 1, 1855, is not to be identified or accepted as new, in the absence of a more sufficient specific character.

Obs. Oncidium stenopetalum Klotzsch me judice est *ramosum Lindl.* Rchb. fil.

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§. 8. Integrilabia Lindl. l. c. p. 30.

Analysis of the species.

Labellum basi latius.
  Scapus 2—3-florus, foliis subaequalis . . . . 100. *meirax.*
   „ paniculatus.
    Panicula heterantha . . . . 101. *ornithocephalum.*
     „ homoeantha.
      cristae tuberculis laevibus.
        sepalis lat. oval. filiformi-unguiculatis . . . . 102. *Magdalenae.*
        sepalis lat. spathulatis acutis . . . . 103. *deltoideum.*
      cristae tuberculis aggregatis hispidis.
        labellum aequilateri-triangulare . . . . 104. *Hartwegi.*
         „ isosceli-triangulare . . . . 105. *nigratum.*
Labellum basi angustius.
  apice trilobum . . . . 106. *pumilum.*
   „ bi-trilobum dilatatum vel integrum.
    Panicula densa folio acuto vix longiore . . . . 107. *nanum.*

panicula vel racemo elongato.
crista convexa oblonga emarginata . . . . 108. *gracile.*
" digitata . . . . 109. *Barbaceniae.*
" bicarinata rostro interposito . . . . 110. *graminifolium.*
scapo 1—2-floro . . . . 111. *brachyandrum.*
lunatum, ungue lineari auriculatum . . . . 112. *lunatum.*
apice acutum, lobulo acuto antrorso utrinque . . . . 113. *maculatum.*
apice obtusum rhombeum . . . . 114. *linguiforme.*
oblongum acutum indivisum.
c. alae minim. triangulares . . . . 115. *mentigerum.*
" maxim. dolabriformes . . . . 116. *miserrimum.*

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100. ONCIDIUM MEIRAX Rchb. fil. in Bonpl. II. 12. 1851. Xenia: p. 42. t. 18. f. 3. L. F. p. 30:

A singular little plant only a few inches high. Leaves solitary on the oblong pseudobulbs, slightly emarginate. Scape two-flowered, shorter than the leaves. Lip cordate, acuminate. Sepals and petals linear, a little narrowed to the base. Prof. Reichenbach places it among the Cimiciferous microchiles, p. 9.

Wild in the Caracas—Wagener.

Rchb. fil. in Bonpl. II. 12:

Pseudobulbis ovatis, folio apicilari ligulato apice subbilobulo, pedunculo ultra bipollicari ex 3—4 internodiis constructo, fractiflexo Hofmeisterellae pedunculo subsimili, alato bifloro, bracteis scariosis triangulis ovaria pedicellata longe non aequantibus, sepalis lineariligulatis acutis basi valde attenuatis, tepalis subaequalibus, basi haud multum angustatis, labello cum gynostemio prope rectangulo, triangulo, angulis lateralibus rotundatis, tuberculo baseos trifalculato, anteposito altero bifalculato, gynostemio gracili, apice aptero, tabula infrastigmatica utrinque alata, anthera?, polliniis?, capsulis oviformibus tripteris rostratis, alis in ovaria descendentibus.

Blüthe so gross, wie die des O. deltoideum; grüngelb mit Purpurfleckchen. Herr Wagener traf nur eine Pflanze. 5000'. März 1851. Caracas.

101. ONCIDIUM ORNITHOCEPHALUM L. F. 30:

O. panicula gracili tenui ab ipsa basi rectangule ramosa heterantha, sepalis petalisque linearibus acuminatis reflexis, labello circulari apiculato, crista multiloba $\frac{5}{\frac{1}{3}}$ verrucis quibusdam segregatis utrinque, columna hirsuta alis maximis acutis fornicatis, stigmate rostrato.

I received a living specimen of this delicate and graceful thing from Mr. Linden, in April 1852. It bears very few small yellow flowers, spotted with bright brown, amidst numerous stellate abortions.

Wild in New-Grenada; near Sa. Maria, in the province of Ocanna—Schlim, 296.

102. ONCIDIUM MAGDALENAE Rchb. in Bonpl., March., 1855. L. F. 31:

O. panicula gracili rectangule ramulosa homoeantha, sepalis petalisque unguiculatis spathulatis acutis, labello cordato obtuse acuminato, crista multiloba $\frac{4}{\frac{1}{3}}$ verrucis 0 segregatis, columnae alis maximis obtuse dolabriformibus, stigmate rostrato.

Very like O. ornithocephalum, but not heteranthous. The flowers are larger, yellow, with a deep brown stain at the base of all the parts. The lateral sepals have filiform ungues longer than the oval limb; the dorsal sepal is nearly sessile: the

dorsal sepal is nearly sessile; the petals finely unguiculate, but much shorter, than the lateral sepals.

Wild on the R. Magdalena; Pericos at the height of 7000 ft. — Wagener.

Rchb. fil. Bonpl. III. 66: Panicula fractiflexa amplissima, sepalo summo ac tepalis ovatis acutis ungue aequilongo unguiculatis, sepalis lateralibus longius unguiculatis, labello cordato acuto abbreviato, tumore basilari trisulcato, falculis quibusdam antepositis, insulis velutinis utrinque, gynostemio paulo refracto, rostello deflexo acuminato, tabula infrastigmatica utrinque biloba, alis bilobis supra obtusis maximis. — Adest folium in specimine hebetato tripollicare oblongum acutum pergameneum. Panicula brachyclada. Flores sicci flavi, sepala ac tepala supra unguem atropurpureo maculata; labelli discus atropurpureus, linea superposita utrinque ejusdem coloris. Pericos. 7000'. Rio Magdalena. Wagener.

103. **ONCIDIUM DELTOIDEUM** Lindl. in B. R. t. 2006. Paxt. Fl. G., II. ic. 257. L. F. 31:

Flowers in a large, stiff, compact panicle. Sepals and petals whole-coloured. Crest of the lip reaching more than half way from the base to the point, consisting of numerous straggling warts and teeth.

Wild in Peru; Chachapoyas—Matthews.

Lindl. Bot. Reg. 1837. XXIII. sub 1920 et 2006:

Pseudobulbis oblongis compressis sulcatis monophyllis, foliis lineari-lanceolatis canaliculatis, scapo paniculato ramis multifloris, flexuosis divaricato, sepalo supremo unguiculato obovato lateralibus longioribus spathulato-lanceolatis apice revolutis, petalis latioribus obovatis crispis, labello deltoideo angulis rotundatis, crista tuberculata serie subduplici tuberculorum juxta basin et quatuor versus apicem majoribus distinctis biseriatis minore interjecto, columnae alis maximis acinaciformibus.

Omnes partes virides leviter glancescentes. Panicula secunda, nutans in apice scapi sesquipedalis. Sepala et petala lutea. Labellum apice acutiusculum reflexum. Crista e tuberculis brevibus oblongis composita, fere totum discum labelli occupans; tubercula baseos interiora in circulum confluentia unico centrali magis prominulo; exteriora in lineas duas interruptas divergentes ordinata; ultra haec versus apicem adsunt unum oblongum in apice circuli et utrinque duo alia majora patentia et magis versus apicem tendentia; circulus et tubercula exteriora pallide flavescunt maculis quibusdam sanguineis interjectis. Alae columnae in planta culta integerrimae, in spontanea denticulis quibusdam marginantes.

Sert 48: Panicle erect, much branched and compact at the top of the scape. Flowers whole coloured, yellow, with only a few red spots on the lip, all the green parts are slightly glaucous.

104. **ONCIDIUM HARTWEGII** Lindl. Pl. Hartw. p. 151. Paxt. Fl. G. II. ic. 133. L. F. p. 31:

O. *micranthum* Skinner in Hort.

Flowers dirty brown, in a loose spreading panicle. Tips of the sepals, petals, and lip, alone dirty yellow. Differs from O. deltoideum not only in colour, but in the crest, half-buried in hair, consisting of nine closely packed papillae.

Wild in Peru; on rocks near Loxa—Hartweg.

Lindl. Hartw. l. c.:

Pseudobulbis ovatis compressis diphyllis, foliis lanceolatis carinatis patulis scapo longissimo paniculato multo brevioribus, panicula angusta ramulosa multiflora, sepalis petalisque lineari lanceolatis acutis undulatis, labello subcordato concavo, cristae tuberculis centralibus minoribus lateralibus ramentaceis truncatis, columnae alis maximis subrotundo-cuneatis serrulatis.

Folia 6—8" longa. Scapus 2—3pedalis. Flores parvi.

In rupibus prope Loxa.

Gardeners Chron. 1858. 15. Oct. 663. c. A straggly plant, with habit of O. altissimum. The pseudobulbs are deeply and ruggedly grooved, leaves are about $1^1/_4$ inch long, broadly lanceolate, very much shorter, than the long narrow, racemose panicle. Flowers small, brownish, with some yellow spots especially at the angles of the lip. Crest of lip bristle with fine stiff white hairs, by which circumstance among others it is known from O. deltoideum.

105. ONCIDIUM NIGRATUM Lindl. in Paxt. Fl. Gard., I., Nr. 122. L. F. p. 31:

Flowers cream-coloured in branched panicles, with dark blackish brown spots and bands. The sepals and petals are linear-lanceolate, equal, and wavy.

Wild in Guayana—Schomburgk, fide Loddiges.

Paxt. Fl. G. I. p. 72. nr. 122. Guiana. Cream col. flowers spotted with blackish brown, arranged in a panicle. Introduced by Lodd.

Panicula ramosa, sepalis linearilanceolatis undulatis acutis aequalibus, labello triangulari postice rotundato, apice angustato acuto, crista multituberculata, columnae alis angustis subdentatis basi productis.

Sir W. Schomburgk disc. Allied to O. phymatochilum. Blossoms as large as those of O. incurvum. Colour of sepals and petals is pale yellow or cream colour with a few irregular brownish black blotches. Lip is bright yellow, with a brown stain or two below the point.

106. ONCIDIUM PUMILUM Lindl. Orch. 205. B. R. t. 920. Bot. Cab. 1732. Bot. Mag. t. 3581. Paxt. Fl. G., II. ic. 132. L. F. p. 31:

Epidendr. ligulatum Arrab. Fl. flum. ix. 15.

Flowers small, yellow in a dense erect branching panicle. The crest consists of a pair of parallel converging ridges, reaching as far as the re-entering angles of the lip. The pollen masses are very narrow, furrowed at the back, and stand upon a sagittate caudicle. Prof. Reichenbach remarks to me, that if it were prudent to dismember Oncidium, this plant would deserve to be removed.

Wild in Brazil; on branches of Crescentia, Rio Comprido—Gardner, 124, Grisebach, Miers; Cabeja de Fradre, Serra d'Estrella—Luschnath.

— Lindl. Hook. Lond. Journ. III. 508. 1844: Kingston, Wm. Purdie, common on Logwood hedges.

107. ONCIDIUM NANUM Lindl. in Bot. Reg. 1842, misc. 30. Paxt. Fl. G., II., ic. 130. L. F. p. 32:

Resembles O. pumilum, but is totally different in the form of the parts of the flower. The wings of the column have a secreting gland at the point, as in some other species.

Lind. l. c. misc. 30:

Pseudobulbis nullis, foliis rigidis ovalibus concavis, racemo stricto foliorum longitudine, sepalis petalisque obovatis obtusis incurvis, labello lucido auriculato apice cuneatim dilatato emarginato, callis disci duobus basilari transverso altero longitudinali trisulcato, alis columnae angustissimis decurvis apice glandulosis.

Habit of O. pumilum, to which it is nearly allied. It differs having very much larger flowers, and in the form of its lip, which is varnished as it were, and bears two large warts, one transverse and one longitudinal, placed at right angles to each other. The form of the wings of the column is almost that of a straight knife-blade directed down-wards, and tipped with a lucid gland. Lodd. obtained from Guayana (1827.)

108. ONCIDIUM GRACILE Lindl. in B. R. sub t. 1920. Paxt. Fl. G., II. ic. 123. L. F. p. 32:

Scape slender, eighteen inches long, with a very few flowers at the end. Lip yellow. Sepals and petals chocolate-brown. This flowered in 1840 with the late Mr. Barker.

Lindl. B. R. l. c. sub 1920:

Pseudobulbis ovatis compressis diphyllis, foliis lanceolatis acutis brevibus, scapo gracili apice racemoso 3—6floro, sepalis lineari-lanceolatis, petalis paulo latioribus, labello cuneato emarginato basi auriculato lamellis duabus linearibus cristato, columnae alis oblongis integris.

Brazil. Von Martius.

The scape of this species is about a foot high, with from 3 — 6 rather small flowers at the end. The leaves are not more than 2 inches long, and the pseudobulbs about 1/3 that length. The lip is yellow, the remainder of the flower reddish brown and green.

Sert. 48: Dry ferruginous rocks of Villa Rica.

109. ONCIDIUM BARBACENIAE Lindl. F. p. 32:

O. scapo paucifloro foliis gramineis longiore, sepalis lateralibus parvis unguiculatis concavis, labello obovato reduplicato emarginato, cristae papillis liberis anterioribus brevioribus dorsali rostrato elongato.

I have only seen a sketch of this, which seems to be quite different from all the other known Brazilian species. Its lip is large and yellow. The sepals and petals are very small, and brownish green, spotted.

Wild in Brazil; Barbacenia, in the province of Minas Geraës—Weddell.

110. ONCIDIUM GRAMINIFOLIUM Lindl. Sert. Orch. sub t. 48. L. F. p. 32:

(A) *holochilum*. Lip ovate, undivided. Raceme as long as the scape or nearly so. Sepals and petals brownish, clouded.

Cyrtochilum graminifolium Lindl. in Ann. Nat. Hist., IV. 384, 1840.

(B) *filipes*. Lip emarginate, somewhat lobed. Raceme confined to the end of the scape. Sepals and petals brownish clouded.

O. filipes Lindl. Sert. Orch. sub t. 48.

Cyrtochilum filipes Id. in B. R. 1841, t. 59.

(C) *Wrayae*. Lip emarginate, somewhat four-lobed. Flowers panicled. Sepals and petals bright yellow, with deep brown spots.

O. Wrayae Hooker in B. M. t. 3854.

A further comparison of these plants has convinced me, that they are all forms of one species, which, like O. maculatum, assumes different forms, according as it is influenced by locality or other causes. The long slender graceful raceme or panicle, and the broad obovate or reniform yellow lip, distinguish it readily from that species.

Wild in Mexico; A. Hacienda del Carmen—Hartweg; Cerro del Capulalpan, Oaxaca, on the ground, at 8—9000 ft. of elevation—Galeotti, 5177; B, Guatemala — Skinner, Hartweg; C. Mexico—Hort.

A. Huc: *Oncidium graminifolium* Lindl. l. c.:

Foliis lineari-ensiformibus acutissimis erectis racemo supaniculato brevioribus, labello obovato integerrimo basi 5 lamellato, columnae alis parvis rotundatis.

Mexico. Hartweg.

Much like C. maculatum, but differs in the form of its lip, its very narrow leave and smaller flowers.

Bot. Reg. XXVII. Misc. 180. (1841): This plant, which resembles C. maculatum in habit, but has a yellow lip, the form of which is that of a wedge, with rounded angles, has flowered with Loddiges, who imported it from Oaxaca (1265). Nearly allied to Cyrtochilum filipes, but differs in the form of the lip.

B. Huc: *Cyrtochilum filipes* Lindl. B. Reg. XXVII. (1841.) Misc. 72:

Scapo longissimo simplici filiformi apice ipso paucifloro, sepalis petalisque lanceolatis conformibus acutis planis, labello cuneato bifido

apice dilatato basi dente porrecto subsimplici subtuberculato aucto, columnae alis minimis cuneatis truncatis.

A Cyrtochilum with the yellow flowers of an Oncid, imported from Guatemala by Mr. Bateman. It has a very slender stem, above 2' long, perfectly simple, on the extreme point of which are 4—5 flowers about the size of those of C. maculatum,

C. Huc: *Oncidium Wrayae* Hook. Bot. Mag. 3851:

Pseudobulbis ovatis compressis sulcatis, foliis 2 terminalibus lineari-lanceolatis, scapo radicali elongato ramoso, floribus paniculatis, petalis sepalisque conformibus ovato-acuminatis patentibus ferrugineo-maculatis, labello unicolori late cuneato-obovato trilobo cristato, crista elevata acute triloba.

Perigonium flavum, rubro-brunneo pictum, salvo labello croceo.

Mexico, collect. Oakfield near Cheltham: Wray.

Bot. Reg. XXVII. 1841. Misc. 57. This would seem new, but is evidently very near O. reflexum, Wentworthianum and Tayleurii. The fig. in Bot. Mag. by which alone I know it, is evidently inaccurate in these minute, but important details, a correct knowledge of which is indispensable in this large and difficult genus, that it is not easy to place any confiance in it.

111. ONCIDIUM BRACHYANDRUM Lindl. Sert. Orch. sub t. 25. L. F. p. 33:

The leaves etc. are unknown. Of my two specimens, one is one-flowered, the other two-flowered. The lateral sepals are so close at the base, as to give the flowers the appearance of being tetrapetalous.

Wild in Mexico—Karwinski; St. Jago el Grande, Oaxaca—Grisebach, 26.

Huc: *Oncidium brachyandrum* Lindl. Sert. l. c. (1839):

Pseudobulbis foliis q. . . ., scapo tenui sub-bifloro, sepalis lineari-lanceolatis undulatis acuminatis, lateralibus basi contiguis, petalis latioribus conformibus, labello obovato membranaceo emarginato convexo, tuberculis binis parallelis extrorsum sinuatis, columna nana crassa longioribus, alis parvis truncato triangularibus.

Mexico, prope St. Jago el grande, Oaxaca. Karwinski.

112. ONCIDIUM LUNATUM Lindl. in Bot. Reg. t. 1929. Paxt. Fl. G., II. ic. 122. L. F. 33:

The figure in the „Bot. Reg." represents the base of the lip as provided with a pair of inflexed teeth. This is a mistake of the artist. It is really a thin circular downy membrane, curved inwards over the central ridge. Prof. Reichenbach suggests to me that this may be nearer Solenidium, than the present genus. It does not, however, appear to me anything more than a somewhat anomalous form of Oncidium. The lacerated membrane at the back of the anther-bed has its parallel in O. ampliatum, and the uneven number of lobes of the crest, so characteristic of Oncidium is made up by the presence of a tooth at the base of the lip, overlooked in the „B. R." The most remarkable features consist in the presence of a broad wedge-shaped recurved peak to the anther, and in the absence of the buccae or cheeeks, which belong to the column of true Oncidia. I add a few memoranda, made upon re-examining a dried flower. Sep. lat. basi ima connata. Labellum basi auriculis circularibus indivisis incurvis; crista ante columnam dente aucta. Columna semiteres, sursum angustior; buccis nullis: alis dimidiato-ovatis membranaceis acutis. Clinandrium dorso in membranam ovatam dentatam productum. Stigma circulare, prominens. Anthera unilocularis, apice membranacea elongata cuneata refracta. Pollinia etc. Oncidii.

Wild in Demerara—Loddiges.

Huc: *Oncidium lunatum* Lindl. l. c. XXIII. (1837.) sub 1920. et tab. 1929:

Pseudobulbis compressis 1—2 phyllis, foliis anguste oblongis planis obtusis scapo brevioribus, scapo racemoso; sepalis petalisque spathu-

latis retusis, labello pubescente lunato basi piloso, laciniis lateralibus minimis inflexis, crista lineari apice depressa utrinque bidentata, dentibus glanduligeris, alis columnae cuneatis integris, clinandrio postice dentato.

A pretty little species with a white crescent-shaped lip, blotched with dull orange, and white sepals, blotched with dull orange.

Demerara. — B. R. l. c. 1929: Alae columnae sanguineo fasciatae.

113. ONCIDIUM MACULATUM Lindl. Sert. Orch. sub t. 48. L. F. p. 33:

(A) *herbaceum.* Sepals and petals pale green, blotched with purple. Lip with four simple carinae, cuspidate, broadest at the point, with the lateral lobes at or above the middle.

Cyrtochilum maculatum Lindl. in Bot. Reg. 1838, t. 44. Sertum Orch. t. 25. Hooker in B. M. 3836.

(B) *Russellianum.* Sepals and petals pale green, with very large well-defined deep purple blotches. Crest with a pair of curved teeth at the base. Flowers much larger.

Cyrt. maculatum var. B. M. t. 3880.

Oncid. tigrinum Hort. Angl.

(C) *parviflorum.* Flowers smaller. Lateral lobes of lip larger. Lateral sepals more or less connate.

Cyrt. maculatum parviflorum B. R. 1841. Misc. 87.

(D) *Lindleyi.* Flowers in a large spreading panicle, coloured as in B. Lip hastate owing to the side lobes being near the base, and the middle lobe much elongated. Keels of the crest toothed and wavy.

Odontoglossum Lindleyi Galeotti in litt.!

Oncid. maculat. Donianum Rchb. fil. in Bonpl., Aug. 1, 1855!

(E) *vinosum.* Sepals and petals dull brown, very little blotched with greenish yellow. Lip yellowish, with the lower half claret-coloured; its lateral lobes short and near the base; the middle lobe ovate, acute, not cuspidate; keels of the crest toothed, lobed, and curved.

(F) *psittacinum* Rchb. fil. Flowers large. Sepals and petals with small distinct circular spots on a yellow ground. Keels of crest simple.

O. psittacinum Linden! fid. Rchb.

There seems to be no line of distinction between these six forms, different as is the appearance of some of them. They are all deliciously scented, and among the most valuable to cultivators. At one time I thought, that the form of the lip and the keels of the crest, which are much lobed or toothed in D and E, might be taken as specific marks: but I fear they are inconstant and accidental. E was cultivated in 1840, by the late Mr. Barker, but I have not seen it since. Of C. no specimens are now in my herbarium.

Wild in Mexico and Guatemala, very common.

Huc: *Cyrtochilum maculatum* Lindl. B. R. XXIV. (1838). Misc. 39:

Pseudobulbis ovatis compressis subangulatis diphyllis basi foliosis, foliis late ligulatis acuminatis striatis apice oblique emarginatis, scapo simplici (?), bracteis brevissimis sqamaeformibus, sepalis petalisque carnosis obovato-lanceolatis acutissimis, labello membranaceo oblongo apiculato utrinque dentato, lamellis duabus ad basin et corniculo utrinque, alis columnae falcatis integerrimis.

Found near Vera Cruz by Hartweg, sent to the Horticultural Soc. It has rather large flowers, with a greenish yellow ground colour, blotched with deep rich purple and a whitish lip, with a few stains of dull red. I have also received it from Msrrs Rollisson.

Huc: Floral Cabinet II. (1838.) Tab. 57.

Huc: *Cyrtochilum maculatum* var. Russelianum Lindl. Bot. XXVI. (1840.) Misc. 86:
One of the many fine varieties of Cyrtochilum maculatum with very large, richly spotted flowers. Mr. Skinner calls it C. Russelii and gives the following account of it: its habitat is cold climate; it luxuriates amongst pines, but only attached to oaks. No plants of the Orchid. tribe are ever found on pines, except Cataseta towards the north coast, but then those plants form such a mass of hairy roots as to secure them completely from the influence of the pitch that in all hot climate, constantly oozes from the pines.

Cyrtochilum maculatum var. *parviflorum* Lindl. B. R. XXVII. (1841.) Misc. 87:
Labello subhastato laciniis lateralibus majoribus. Mrs. Loddiges flowered a Mexican plant (Nr. 794), which in so many respects corresponds with the now common C. maculatum, that I cannot regard it as more than a variety, but which never the less differs in having smaller flowers, with the lateral lobes of the lip so much larger, than usual as to give it a hastate appearance and with a frequent union between the lower sepals more or less complete. This circumst. breaks down yet more the limits between Cyrtochilum and Oncidium.

Oncidium maculatum Donianum Rchb. fil. Bonpl. III. 215:

Labello ligulato acuto ante basin rotundatam utrinque extrorsum angulato.

Das vorliegende Blatt breit zungenförmig mit stumpfer Spitze. Das vorliegende Stück Inflorescenz ziemlich zwei Fuss lang, traubig, unten mit drei zweiblüthigen Zweiglein. Hüllblätter gefärbt und gestaltet, wie bei O. maculatum, aber schmäler. Lippe zungenförmig, spitz, vor dem Grunde jederseits mit vorspringender Ecke, grünlich weiss, über der Mitte mit dunkelbraunem Bande; vom Grunde bis an dieses Band 4 niedrige, vorn lappige Kiele, welche am Grunde fleischig wulstig sind. Säule niedrig, häutig, schmal, oben und unten spitze Flügelchen; untere Partie mit Längskiel und 2 Gruben wie O. maculatum. — Garten des Herrn Pescatore, cultivirt durch Herrn Lüddemann, und des Herrn Lenneo Deman zu Bierbais, cultivirt durch Herrn Keilig.

Cyrtochilum maculatum Lindl. var. *aristatum* Rgl. Ind. Sem. H. Petrop. 1855. (*Cyrtochilum aristatum* H. Petrop.):

Sepalis petalisque lineari-lanceolatis, flavis, pallide fusco-purpureo-maculatis; labello basi lamellis duabus, corniculis nullis; alis columnae utrinque arista unica sursum versa munitis. Cetera ut formae genuinae.

114. ONCIDIUM LINGUIFORME Lindl. Orch. Linden. 77. L. F. p. 34:
O. umbrosum Rchb. fil. in Bonpl. Ap. I. 1851!
Odontogl. umbrosum Id. in Linn. XXII. p. 848. Fol. Orch. Nr. 13.

A flower sent by Rchb. enables me to identify these synonyms. The plant has narrow leaves almost two feet long, and a weak branching panicle, the divisions of which are very thinly occupied by flowers, of a dirty yellow colour, with a wine-red lip and column. It flowered in 1854, with Sir Philip Egerton; and is not worth cultivation.

Wild in Venezuela; province of Merida, at 5000 ft. of elevation—Linden, 672; shady forests—Moritz, 1096.

Lindl. l. c. p. 14:

Foliis ensiformibus acutissimis panicula divaricata, sepalis lanceolatis patentissimis lateralibus unguiculatis disjunctis, petalis latioribus, labello linguiformi subrhombeo basi angustato lamellis 5 inaequalibus, columnae nanae alis rotundatis.

„An epiphyte from the province of Merida at the height of 5000'. Juli. Pseudobulbs oval compressed ribbed. Petals yellow. Lip rose colour. (Nr. 672). Leaves 18" long, and from ³/₄—1" broad.

O. (*Integrilabia*) *umbrosum* Rchb. fil. in Bonpl. II. 12. *Odontoglossum umbrosum*

Rchb. fil. Linnaea. Lindl. Folia. *Odontoglossum cimiciferum* Klotzsch Hort. Berol. Semin. 1822. nec Rchb. fil.: panicula laxa diffusa, ramulis flexuosis (praesertim in planta spontanea), bracteis squamaeformibus membranaceis dilatatis tertiam seu quartam ovarii pedicellati aequantibus, perigonio patulo, sepalis lanceolatis acutis, tepalis oblongis acutis subfalcatis, omnibus viridiflavis, deorsum rufobrunneis, labello violaceo ab unguiculata basi pandurato retusiusculo, basi latiori, apice nunc bi-, seu trilobulo, carinis 2 bidentatis in basi, interposito denticulo, gynostemii humilis alis obtuse quadratis externo latere nunc minute crenulatis, tabula infrastigmatica producta. Merida. 5000'. Januar. Der weithin windende Blüthenstengel rothbraun. Blühte in Herrenhausen. — Caracas. Wagener.

Gardn. Chronicle 1854. 565:

A very ugly straggling small-flowered species with a green calyx and petals and a dull purple lip. It was found in New-Granada by Moritz, and has reached our gardens through some of the importers. It flowered the other day with Sir Philip Egerton. Mr. Reichenbach originally described it as an Odontoglossum, an error that he has since corrected. It is near the Oncidium Lindleyi of Galeotti, a Mexican plant not yet introduced.

115. ONCIDIUM MENTIGERUM L. F. p. 34:

O. panicula ramosissima elongata pyramidali, sepalis lateralibus elongatis petalisque lanceolatis acutis, labello sessili oblongo acuto carinis cristae 2 antrorsum attenuatis, columnae alis obsoletis triangulis buccis nullis.

Odontoglossum mentigerum Rchb. fil. in Bonpl., Ap. 15, 1844.

Of this species the habit is that of O. pyramidale. It has very small flowers on rather distant spreading or ascending branches. It approaches nearly the Myanthian Odontoglots, to which Prof. Reichenbach perhaps refers it rightly, especially considering its resemblance to Odont. megalophium. The lip is certainly not three-lobed as Rchb. describes it. The flowers seem to be whole-coloured, with a paler lip.

Wild in Peru; sources of the Marannon—Warscewicz.

116. ONCIDIUM MISERRIMUM Rchb. in Bonpl., March, 1855:

This seems to be nearly related to the last, from which it differs in having a crest with two keels and three off-lying tubercles in front, very large, blunt, hatchet-shaped column-wings, and the lateral sepals not very different from the petals.

Wild in Venezuela; Ocanna—Wagener.

Huc: *O. (Cimicifera ornithorrhyncha) miserrimum* Rchb. fil. in Bonpl. III. 66:

Floribus minutis hyalinis, labello ovato acuto, carina apice biloba in basi, tribus callis antepositis, callo medio quidem posteriore, alis gynostemii oblongis magnis.

Adest ramus paniculae basi ramulosus. Rami fractiflexi, pauciflori, bracteae triangulae acutae ovariis pedicellatis quater breviores. Sepala cuneato-ovata acuta. Gynostemium tenue, tabula infrastigmatica paulo producta; dens erectus in limbo antico androclinii supra processum rostellarem dentiformi rostratum deflexum; fovea angusta oblonga; alae oblongae utroque apice obtusae hyalinae. Anthera longe rostrata. Ocanna. Wagener.

Huc includatur: *Miltonia* Lindl. Fol. I. 1853. Dec. 1. (B. R. 1977.):

Sepala explanata, aequalia, lateralibus basi paulo connatis. Petala conformia, aequilonga. Labellum indivisum, sessile, cum columna continuum, lineis quibusdam elevatis interruptis juxta basin. Columna nana, auriculis 2, nunc cum clinandrio cucullato confluentibus. Stigma excavatum. Pollinia 2, cereacea, postice sulcata; caudicula obovata; glandula oblonga. Anthera operculata, membranacea, nuda. Herbae epiphytae Americae tropicae, pseudobulbosae, colore saepius lutescente.

Folia angusta, plana. Racemi simplices, radicales, pedunculo saepius squamis arcte imbricato. Flores speciosi, lutei, vel purpurei.

The short column separates this genus from Oncidium and Odontoglossum; its auricles from Brassia. Its habit is peculiar. The section B bears the same relation to Miltonia as the §. Trymenium to Odontoglossum.

Subdivisions of the genus.

§. A. Column with two auricles; anther-bed naked. 1. *spectabilis*. 2. *Karwinskii* Ldl. (cf. Odontoglossum). 3. *Clowesii* Lindl. 4. *Russelliana* Lindl. 5. *Regnellii* Rchb. 6. *flavescens* Lindl.

§. B. Column wings blended with the cucullate membranous raised edge of the anther-bed. 7. *anceps* Ldl. 8. *cuneata* Ldl. 9. *candida* Ldl.

Rchb. fil. Xen. I. p. 128. Clavis generis:

Bracteae spathaceae ovario pedicellato aequales seu longiores.
Labellum gynostemio adnatum. Multiflora. (Labellum panduratum acutum undulatum lineolis velutinis.) . . . . *flavescens* Lindl.
Labellum liberrimum. Uniflorae.
Labellum pandurato obovatum. Vaginae pedunculi imbricantes alato carinatae . . . . *spectabilis* Lindl.
Labellum ligulato panduratum acutum. Vaginae pedunculi distantes exalato carinatae . . . . *anceps* Lindl.
Bracteae ovario pedicellato manifeste breviores.
Labellum planum, basi cristato carinatum, gynostemium non involvens.
liberum, pandurato obovatum tricarinatum. Gynostemii alae apice falcatae . . . . *Regnellii* Rchb. fil.
liberum panduratum, novemcarinatum. Gynostemii auriculae minutae . . . . *Clowesii* Lindl.
basi cum gynostemio conspicue connatum sessile ligulato panduratum; carinae septem . . . . *Russelliana* Lindl.
Labellum basi cuneatum in laminam obovatam; carinae duae *cuneata* Lindl.
„ orbiculatum basi cristato carinatum undulatum circa gynostemium convolutum . . . . *candida* Lindl.
„ ovatum planum nudum . . . . *Warscewiczii* Rchb. fil.

Obs. Nitidissima generis adest monographia ab ill. Lindley confecta: cf. „Folia Orchidacea" V· 1853. — Ill. Lindley tamen ansam posuit in androclinio nudo seu marginato. Nos contra in *Miltonia spectabili* Lindl. ac *Russelliana* Lindl. observavimus hos characteres omnino inconstantes, unde aliam ansam quaesivimus et ita quidem, ut licet artificialibus characteribus distantes, species similes consociatae fuerint.

A. Bracteae spathaceae ovario pedicellato aequales seu longiores. Rchb. fil. l. c. 129.

a. Multiflora labello adnato.

116. — 1. — ONCIDIUM FLAVESCENS Rchb. fil. Mss. Huc: *Miltonia flavescens* Lindl. Rchb. fil. l. c. 129:

Pseudobulbus oblongoligulatus anceps diphyllus. Folia ligulata acuta. Basis bulbi vaginis distichis foliisque stipata. Pedunculi pars inferior anceps vaginis arctis vestita; pars superior obtusangulo flexuosa. Bracteae scariosae spathaceae acuminatae patulae flores aequantes excedentesve. Sepala ac tepala sublatiora ligulata acuta. Labellum infra basin gynostemii adnatum panduratum acutum seu oblongum acutum a basi lato cuneata, margine undulatum ac minute crenulatum lineolis velutinis; linea antice bicruris nunc a dente prosiliens in ima basi. Gynostemii tabula a labello semi-

tecta seu tota abscondita. Alae abbreviatae nunc lobulatae, nunc integrae infra foveae marginem infimum transcendentes (more *Oncidii Papilionis* Lindl.). In provincia Minas Geraës Regnell! Macahé and Bananal Descourtilz fid. ill. Lindley.

Huc: *M. flavescens* Lindl. Sert. sub t. 48. L. F. p. 8:

M. pseudobulbis diphyllis ovalibus ancipitibus, foliis ligulatis obtusis, scapo ancipiti arcte vaginato multo brevioribus, racemo disticho flexuoso, multifloro, bracteis carinatis convolutis acuminatis glumaceis ovario longioribus, sepalis petalisque linearibus acutis stellatis, labello ovato-oblongo undulato acuto basi pubescente canaliculato striato, alis columnae acinaciformibus integerrimis.

M. stellata Lindl. Sert. t. 48.

Cyrtochilum stellatum Lindl. Sert. t. 7.

Cyrtochilum flavescens Lindl. in Bot. Reg. t. 1627.

Flowers pale yellow with no spots. Lip white with yellow streaks. Wings of the column yellow streaked with crimson. Bracts rose-coloured. I believe, that my M. flavescens and stellata are the same species in different states, M. stellata being a very large vigorous specimen and M. flavescens a small starved one. The so-called Mexican habitat of the latter is certainly a misrepresentation of some nurseryman. It is singular, that the large form represented by Descourtilz in his drawings in the possession of M. Delessert, and on which M. stellata was founded, has nowhere occurred in the many collections of wild Brazilian plants, that have been submitted to me. Even Mr. Miers has in his herbarium nothing beyond a specimen from the Garden at Rio Janeiro.

Wild in Brazil; Minas Geraës—Regnell; Macahé and Bananal—Descourtilz.

b. Uniflorae labello libero. Rchb. l. c. p. 129.

116. — 2. — ONCIDIUM ANCEPS Rchb. fil. Mss. Huc: *Miltonia anceps* Lindl. in Rchb. Xen. I. 129. Tab. 21:

Pedunculo ancipiti interrupte ancipiti vaginato, labello aequaliter pandurato acuto lamellis ternis in basi.

Miltonia Pinellii Hort. *Odontogl. anceps* Klotzsch in Otto und Dietr. Allg. Gartenzeitg. 1850. 250. (cum Odontogl. constricto comparatum!). Cf. supra Xenia Orchidacea p. 56. Tab. 21. Dorsum carinae non altum abruptumque uti in *Miltonia spectabili* Lindl.

Huc: *Odontoglossum anceps* Klotzsch l. c. p. 120:

Pseudobulbis oblongis compressis, versus apicem attenuatis, foliis binis, oblongis, apice oblique rotundatis subconduplicatis, ternis, racemo terminali, ancipiti, basi attenuato, unifloro, foliis longiore biarticulato, articulis distantibus, bracteatis, bracteis amplexicaulibus, vagina bivalvi, membranacea, subarida, sordide carnea; germine stricto, tereti, inferne attenuato, perigonii foliolis lanceolato-oblongis, obtusis patenti recurvis viridiflavis, exterioribus lateralibus linea purpurea notatis, supremo interioribusque immaculatis; labello rhomboideo-lyrato, albo, apice recurvo, attenuato, brevi unguiculato, inferne lineis purpureis punctulisque oblongis appendiceque bidentato atque anteriore intermedio breviore instructo; gynostemio erecto apice brevi, bilobo, a flavido rubescente, infra apicem biauriculato.

Pseudobulbi laeves, 2 pollices longi, inferne 6 lineas lati, apice 3½ lineas lati. Folia 4 pollicem longa, 6 lineas lata. *Scapus* anceps, 4½ pollices longus, 2—3 lineas latus. Perigonii foliola pollicem longa, 2 — 2½ lineas lata. Labellum 15 lineas longum, in medio 10 lineas latum. Ab *Odontogl. constricto* differt perigonii foliolis obtusis, columna cirrhosa.

Brasilien. Allardt.

Huc: *Miltonia anceps* Lindl. Fol. sub Nr. 7. p. 3:

M. Pseudobulbis compressis versus apicem attenuatis, foliis binis oblongis apice oblique rotundatis, racemo ancipiti unifloro foliis longiore biarticulato, sepalis petalisque lanceolato-oblongis patenti-recurvis, labello rhomboideo-lyrato apice recurvo basi pubescente bilamellato dente intermedio breviore adjecto, clinandrio circulari carnoso dentato.

Odontogl. anceps Klotzsch in Allgem. Gartenztg., Aug. 9, 1851.

„Pseudobulbs two inches long. Leaves four inches long, by six lines broad. Scape two-edged, four and a half inches long. Sepals an inch long, greenish yellow, the two side ones with a purple line, the upper and the petals without marks. Lip white with purple lines and spots at the base.“ Such is an abridgment of Dr. Klotzsch's account of his O. anceps which I entertain no doubt is the same as a Brazilian plant, which many years since flowered with the late Messrs. Loddiges, although the colour is somewhat different. In that plant the leaves etc., had the same scorched yellow appearance which characterizes M. flavescens. The sepals were dull yellow, linear, acuminate; the petals exactly the same except being much broader. The lip was yellow with a little tinged, brown near the base, and with three purple downy veins proceeding from the point of the downy lamellae. Of these there were three, completely confluent except at the point, and the middle one much shorter than the others. The anther-bed was expanded into a circular purple hood, white and toothed at the edge, and much longer, than the anther.

Wild in Brazil—Klotzsch; Loddiges.

116. — 3. — ONCIDIUM SPECTABILE Rchb. fil. Mss. Huc: Rchb. fil. Xen. I. 129: *Miltonia spectabilis* Lindl. B. Reg. 1837. sub 1976:

Pedunculo ancipiti dense ac imbricanter ancipiti vaginato, labello cuneato pandurato obovato rotundato retuso lamellis ternis in basi.

Bot. R. 1837. 1992—1845. sub 8. B. M. 4204. Endlich Parad. Vindob. XI. *Macrochilus Fryanus* Knwl. Westc. Fl. Cab. 45. (1. Sept. 1837.) Pseudobulbus oblongo ligulatus anceps diphyllus. Folia lineari ligulata obtuse acuta. Pedunculus aeque pedalis. Vaginae argute carinatae; carina vulgo paulo infra apicem abrupta. Bractea subaequalis ovario aequilonga. Sepala oblonga acuta, lateralia ima basi cum labello connata. Tepala latiora, vulgo apicibus revoluta. Labellum panduratum, antice obtusatum manifeste latius; lineae carinatae geminae in basi, apice obtusangulo divergentes, carinula interposita; velutina uti nervi primarii. Gynostemium crassum; tabula infrastigmatica ima basi introrsum angulato impressa, infra foveam emarginata. Limbi foveae laterales ab aliis liberae. Alae anguste quadratae, integerrimae lobulataeve, saepe dorso androclinii cucullato concretae, dum alias dorsum androclinii nudum. Anthera obtusa conica laevis. — Ex colore tres habemus varietates:

a) *porphyroglossa*: perigonium candidum, labellum totum purpureum; alae gynostemii purpureae. Icones supra citatae. Planta vulgaris.

b) *radians*: recedit a praecedenti labelli candidi basi purpurea aquosis radiis in dimidium anticum transeuntibus. (Androclinium valde cucullatum.) An *Miltonia bicolor* Hort. cum amic. hortul. Kramer in litteris nuperrime nos monuerit, hanc nonnisi varietatem esse Miltoniae spectabilis? Adest specimen unum cultum in herbario, quod unde acceperimus nescimus; nisi tamen egregie fallimur: ex horto Jenischiano.

c) *Moreliana* Gardn. Mag. XIV. 41: totus flos pulchre purpureus. B. M. 4425. Paxt. Mag. XVI. 77. *Miltonia Moreliana* Hort. Haec autumno, vulgaris Junio floret.

In Brasilia et quidem in Serra de Estrella Weddell ic. itin. 17 ex ill. Lindl. Folia V. Miltonia p. 1.

M. spectabilis Lindl. Fol. l. c. p. 1:

M. pseudobulbis ovalibus ancipitibus laevibus, foliis ligulatis paten-

tissimis, pedunculis unifloris squamis magnis fuscis striatis carinatis dense imbricatis, sepalis ovalibus planis, petalis conformibus latioribus revolutis, labello maximo cuneato rotundato basi trilamellato, columnae alis angustis acutissimis.

(A). Sepals and petals white. *Macrochilus Fryanus* Fl. Cab. t. 45, Sept. 1, 1837.

(B). Sepals and petals purple. B. M. t. 4425. *Miltonia Moreliana* Hort.

Flowers very large, solitary; in the original species; with pale straw-coloured sepals and petals, and a broad violet purple lip ribbed with crimson. The variety B has nothing whatever except colour to distinguish it. The foliage has the unhealthy tern colour so common in this genus.

Wild in Brazil; Serra de Estrella—Weddel, ic. ined. Nr. 17.

B. Bracteae ovario pedicellato manifeste breviores.

a. Labellum planum carinato cristatum gynostemium non involvens.

Labellum liberrimum.

116. — 4. — ONCIDIUM REGNELLII fil. Mss. — Rchb. fil. Xen. I. 130: *Miltonia Regnelli* R. fil.:

Labello sessili obpandurato, antice obtuso emarginatove plano carinulis ternis in basi, gynostemii alis angustis apice acutis. Cf. infra.

Rchb. fil. l. c. p. 133. Otto und Dietr. Allg. Gartenztg. 1855. (XXIII.) 322.

Pseudobulbus oblongus anceps vaginis foliisque stipatus. Folia lineari ligulata obtuse acuta apice vulgo inaequalia. Pedunculus elongatus gracilis (duo, quos teneo, triflori). Vagina una alterave in basi. Bracteae triangulae brevissimae. Ovarium pedicellatum nunc vix pollicare, nunc in specimine culto infimum subbipollicare). Perigonium illi *Miltoniae spectabilis* Lindl. paulo minus; patens. Sepala oblongolanceolata, supra nervum medium extus paulo ac obtuse carinata; lateralia ima basi uti illa *Miltoniae spectabilis* Lindl. paulo inter se ac cum labelli basi connata. Tepala connata oblonga acuta, seu acuta sessilia. Omnia candida. Labellum cuneato obpanduratum, antrorsum multo latius, antice emarginatum nunc cum apiculo; venae radiantes basi omnes plus minus elevatulae; media carinam angulatam abruptam sistens, laterales mediae reliquis magis elevatae, basi velutinae (flavescae videntur); reliquum labellum coeruleo-purpureum. Gynostemium subsemiteres; androclinium postice acutangulum; alae angustae semiligulatae apice libero acutae, limbo externo crenulatae seu integerrimae; fovea obovata limbo utrinque tumido. Anthera galeata antrorsum breviligulata; minutissime obtuseque papuloso scabra. Pollinarium prope *Miltoniae spectabilis* Lindl. Caudicula a latiori basi antrorsum angustata. Tabula infrastigmatica apice utrinque antrorsum dentata; basi antrorsum angulato impressa. — Cf. Walp. Ann. III. 564. Xen. l. c. Tab. 47.

Lindl. Fol. p. 2.:

M. pedunculo paucifloro, bracteis lanceolatis nervosis pedicellis longioribus, sepalis lanceolatis, petalis oblongis nunc obovatis acutis, labello subpandurato, apice quadrato emarginato basi cuneato, callis 3 elevatis parvis intermedio minore, alis columnae integris falcatis.

This, of which I have received a single dried flower from Mr. Reichenbach, appears to be nearer M. Russelliana than any other species. I possess no further information concerning it.

Wild in Brazil; Minas Geraës—Regnell.

116. — 5. — ONCIDIUM CLOWESII Rchb. fil. Mss. — Rchb. fil. Xen. I. p. 130: *Miltonia Clowesii*:

Labello sessili pandurato obtuso seu obtuse acuto antice nunc undulato, carinulis novenis in basi, gynostemii alis auriculas minutas juxta gynostemii basin sistentibus.

Odontoglossum Clowesii Lindl. Bot. Reg. 1839. (XXV). Misc. 159.
Brassia Clowesii Lindl. Bot. Reg. 1845. (XXX.) 15.
Miltonia Karwinskii Hort. fere omnium continentis, nec Lindl.

Pseudobulbus anceps oblongus attenuatus. Folia lineari ligulata satis angusta. Pedunculus gracilis elongatus tri — quadripedalis basi paucivaginatus superne secundiflorus, racemosus, haud ita multiflorus (specimen herbarii optimum est decemflorum). Sepala ac tepala stellata, lanceolata, sepala acuminata, tepala acuta. Labellum panduratum basi manifeste angustius; basi saepe rectum, nec infractum (uti, quod nunc accidit, constanter fieri putavimus: cf. v. Mohl u. Schlechtenthal Bot. Zeit. 1852, 918.). Carinae geminae elongatae mediae interjecta minori, superadditae utrinque ternae breviores. Gynostemii tabula mutica parte superiori antrorsa; foveae limbi utrinque ampli. Alulae minutae utrinque basi loco alarum. Anthera obtuse conica laevis.

a) *pardina*: perigonium flavum maculis cinnamomeo purpureis; labelli basis purpurea, portio antica alba, sicca subcinnabarina.

b) *castanea*: recedit perigonio non flavo, sed brunneo, maculis pallide cinctis, labello toto purpureo.

Crescit in Brasilia. Organ mountains in a deep ravine. Gardner 699.

bb. Gynostemium basi cum labello connatum. Rchb. fil. l. c. 131.

116. — 6. — ONCIDIUM RUSSELLIANUM Lindl. B. Reg. 1837. (XXIII.) 1830. — 1845. (XXXI.) sub 8. Rchb. fil. Xen. I. p. 131. (*Miltonia Russelliana* Lindl. Sert. 48):

Labello sessili pandurato ligulato cum apiculo minuto, labelli carinis septem, internis longissimis, externis brevissimis, omnibus apice angulatis, gynostemii alis quadratis postice cucullato confluentibus.

Pseudobulbi lineari ligulati diphylli graciles. Folia ligulata. Racemus pauciflorus (— 6-florus, vulgo biflorus). Bracteae lanceotriangulae ovariis pedicellatis multo longiores. Perigonium connivens nunquam apertum brunneo olivaceum maculis fuscis. Sepala et tepala lanceolata acuta. Labellum violaceum nunc basi gynostemii adnatum posticum maculis quibusdam obscurioribus pallida zona marginatis. Tabula infrastigmatica utroque apice acutangula. Androclinium vulgo cucullatum nunc prope nudum!

Crescit in Brasilia „near Tejuco in the province of Rio Janeiro".

Lindl. Fol. p. 2:

M. pseudobulbis ovatis costatis diphyllis, foliis ligulato-lanceolatis patentibus, racemo paucifloro, bracteis acuminatis ovario triplo brevioribus, sepalis petalisque conformibus ovato-oblongis subundulatis, labello postico oblongo-cuneato retuso apiculato subsinuato, lamellis disci pluribus parallelis interruptis truncatis, columnae bidentatae alis magnis falcatis.

Oncidium Russelianum Lindl. in B. R. t. 1830.

Flowers dingy greenish purple. Lip posterior, dull violet. Wings of the column yellow. Border of the stigma crimson.

116. — 7. — ONCIDIUM SPECIOSUM Rchb. fil. Mss. Rchb. Xen. I, p. 131: (*Miltonia cuneata* Ldl. Bot. Reg. 1844. (XXX.) Misc. 28. et 1845. (XXXI.) 8):

Labello a basi bene cuneata ovato lobato, carinis geminis per unguem in laminae basi abrupte obtusangulis, gynostemii alis magnis quadratis postice cucullato confluentibus, denticulatis.

Miltonia speciosa Klotzsch! in Otto u. Dietr. Allg. Gartenztg. Nr. 17. p. 129. (Aprili!!).

Pseudobulbi ligulati ancipites diphylli. Folia ligulata acuta. Pedunculus pauciflorus. Bracteae triangulae ovariis pedicellatis bene breviores. Sepala oblongolanceolata basi bene cuneata, paulo undulata; lateralia basi connata; tota rufofusca, seu

apicibus flavida. Tepala latiora undulata apiculata. Labelli albi unguis basi gynostemii adnatus. Androclinium utroque apice acutangulum. Anthera velutina.

Brasilia?

Obs. Miltonia speciosa Klotzsch! herb. gen. berol. et l. c. nil sistit nisi specimen grandiflorum bene cultum ex horto Deckeriano. Haec est longa diagnosis: „Pseudobulbis ovato oblongatis compressis, superne attenuatis bifoliatis pallide viridibus glaberrimis laevibus basique distiche foliatis; foliis oblongis submembranaceis glaberrimis laete viridibus brevi-acutis, apice recurvatis, basi conduplicato attenuatis inaequalibus, subtus acuto carinatis; racemo tereti basilari erecto e viridi fuscescente remote bracteato foliis longiore bi — trifloro; floribus magnis patentibus; bracteis lanceolatis acuminatis tenuissime membranaceis fuscescentibus suffultis; perigonii foliolis oblongo elongatis breviter recurvato acuminatis stramineis undulatis fusco maculatis, basi attenuatis, interioribus maculis confluentibus, basi planis; labello magno candido plano rotundato bifido (N. 1.), dente acuto brevissimo interjecto subrepando elevatim ramoso venoso, basi cuneato truncato bilamelloso cum pede columnae connato; gynostemio brevi crasso albido, antice roseo, angusto bialato, alis albidis; androclinio bilobatim marginato, lobis obtusis fimbriatis (N. 2.); anthera semibiloculari molliter-hispida."

Ad N. 1. addimus calami lapsu hoc scriptum, cum labellum vix emarginato bilobulum in specimine originali dici possit.

Ad N. 2. addimus, non fimbriatum, sed denticulatum esse hunc limbum.

„Die Publication dieser schönen Acquisition haben wir wiederum dem Eifer, der Umsicht und Aufmerksamkeit des Herrn Obergärtner Reinecke zu danken, welcher das aus Brasilien lebend erhaltene Exemplar zur Blühte brachte. Dieselbe ist der *Miltonia cuneata* Lindley zunächst verwandt, unterscheidet sich jedoch durch ganz glatte Scheinknollen (N. 1.), schmalere zurückgekrümmt-zugespitzte Blätter (N. 2.), kleinere Blüthen (Nr. 3.), den zweilappig gefransten Antherengrubenrand (N. 4.) und durch die stachel-zottige Anthere (N. 5.)."

Omnia haec nihil valent. Ad N. 1. pseudobulbi nuper introducti seu plantae loco sicco cultae costati, plantae loco humido cultae laeves. N. 2. Folia in omnibus his plantis omnino varia, ubi ab aliis depressa — recurvata; ubi libere culta — assurgentia; angustiora; latiora. N. 3. Flores speciminis typici majores, quam flos ab ill. Lindl. missus; lamina quidem paulo major in planta Klotzschiana, quam in icone Lindleyana. N. 4. Androclinium non fimbriatum, sed denticulatum; sinus posticus emarginatus vulgo occurrit et conspici potest in tribus infimis floribus iconis Lindleyanae. N. 5. Anthera velutina — aculeato villosa non est! — in omni *Miltonia cuneata* Lindley adest.

Lindl. Fol. p. 4: *Miltonia cuneata* Lindl. in Bot. Reg. 1844, Misc. 28., 1845. t. 8:

M. pseudobulbis ovato-oblongis, foliis oblongis striatis subundulatis, racemo plurifloro, bracteis elongatis glumaceis, sepalis petalisque lanceolatis undulatis, labello cuneato rotundato basi bilamellato utrinque subrepando, columna medio bidentata, clinandrio membranaceo cucullato denticulato repando retuso.

Flowers nearly four inches in diameter; sepals and petals rich brown tipped with green. The lip is pure white, with a tinge of pink near the base, in form different from M. candida, for it is scarcely curled at the edge, is much narrowed to the base, and has only one pair of plates instead of two and a half. The wings of the column too are scarcely divided, or at all events not at all notched.

Wild in Brazil?

b. Labellum carinato cristatum convolutum circa gynostemium. Rchb. fil. l. c. p. 132.

116. — 8. — **ONCIDIUM CANDIDUM** Rchb. fil. Mss.: Xenia I. p. 132: *Miltonia candida* Lindl. Bot. Reg. 1838. (XXIV.) Misc. 29:

Labelli subrotundi undulati convoluti lamellis quinis in basi, gynostemii alis angustis serrulatis in androclinii limbo serrulato confluentibus.

Pseudobulbi ovati oblongive ancipites diphylli. Folia ligulata acuta pedunculo breviora. Pedunculus racemosus. Bracteae scariosae triangulae ovario pedicellato bene breviores. Sepala a cuneata basi ligulata acuta. Tepala latiora brevius cuneata. Labellum prope orbiculatum, nunc trilobulum, seu quadrilobulum. Carinae laterales furcatae. Gynostemii tabula infrastigmatica utroque latere apicali valde angulata. Anthera pulchre velutina. Caudicula linearis (dum in spectabili ovata!). Callus globuliformis stipitatus in ima basi gynostemii. Limbus foveae velutinus. Ex colore ac florum amplitudine varia:

a) *laxa*: pedunculo erecto seu pendulo, multifloro (—12), floribus mediocribus flavis brunneo fasciatis, labello albo. (Ic. Sert.)

b) *flavescens* Hook. Bot. Mag. l. c.: eadem gynostemio ac labello flavidis.

c) *Jenischiana* Rchb. fil. in Otto und Dietrich Allg. Gartenztg. 1835. (XXIII.) p. 23: Xenia Orchidacea tab. 51: pedunculo stricto, grandiflora, pauciflora, sepalis tepalisque prope totis cinnamomeis, excepto margine, labello candido.

Brasilia.

Lindl. Fol. p. 4: *Miltonia candida* Lindl. in Bot. Reg. 1838, Misc. 29. Sert. t. 21:

M. pseudobulbis ovatis apice angustatis diphyllis, foliis angustis racemo brevioribus, bracteis membranaceis concavis squamaeformibus, sepalis petalisque oblongis aequalibus, labello subrotundo crispo circa columnam convoluto basi 5-lamellato, columna pubescente basi biauri, clinandrio cucullato crispo membranaceo utrinque decurrente.

(A) Column purple, lip white.

(B) Column and lip yellowish. Bot. Mag. t. 3793.

Flowers in long erect racemes, very large; sepals and petals spotted with brown; lip white. One of the finest plants of the order.

Wild in Brazil.

Lindl. Bot. Reg. XXIX. (1843.) Misc. 111:

Of this fine plant a most beautiful variety flowers with Mr. Rucker, who purchased it at Hamburgh. Its flowers are twice as large as those of the original variety, the lip is of a most brilliant white, and the sepals and petals are of a deep rich brown spotted towards the extremities only with yellow.

c. Labellum ecarinatum planum ovatum. Rchb. fil. l. c. p. 132.

116. — 9. — **ONCIDIUM FUSCATUM** Rchb. fil. Mss. Rchb. fil. Xen. I. p. 132: *Miltonia Warscewiczii*:

Adsunt ramuli duo flexuosi cum vestigiis caulis primarii, quorum alter quatuor, alter quinque bracteas naviculares acutas ovario pedicellato quater breviores gerit. Flores illis *Odontoglossi Karwinskii* Rchb. fil. subaequales. Sepala ac tepala cuneato ligulata obtuse acuta margine crispula obscura (cinnamomea?). Labellum sepalis bene longius ovatum, oblongum flabellatumve, antice bilobum seu retusum cum apiculo, basin versus velutinum, duabus tertiis inferioribus obscurum concolor, anticum pallidum (cinnamomeum albumque?). Gynostemium crassum ac brevissimum, siccum vix lineam excedens. Androclinium postice angulatum angulum versus utrinque angulo insilienti; aptero marginatum; limbi foveae utrinque Miltoniarum more evoluti; dens rostellaris lineari retusus; tabula infrastigmatica margine superiori emarginato; lobo utroque laterali nunc simpliciter integerrimo, nunc paucicrenato; utrinque paucisulca-

tum; labellum mediae tabulae (nec lateribus) adnatum! — Planta mihi diu dubia, cum an ad Oncidia, an ad Miltonias melius ducenda, nescirem; nunc tandem cum proprio Marte, tum suadente ipso ill. Lindley huc ducta, cum utrique nostrum novum genus non statuisset. — Detecta a nob. de Warscewicz.

Obs. Eandem specimen, seu valde affinem, jam diu novimus ex herbario Pöppigiano; sed statu deplorabili. Adsunt icon, specimen, scheda. — Icon profert plantam bipedalem. Folia stipantia tria, cuneato oblongo acuta. Pseudobulbus oblongus monophyllus, folio reliquis foliis aequali. Pedunculus paulo brevior nudus, apice biflorus, supra florem superiorem decisus, ebracteatus (Tetradynamarum more). Flos exacte idem, quem descripsimus, sed duplo major; sepala ac tepala pulchre undulata. Adscripta haec: „Bleibt weg. Blumen im Herbar zerstört gefunden." — „*Sobralia biflora* Ruiz. Pav." (omnia praeter „biflora" radendo prope destructa. —) „Diar. bot. N. 1765. Genus pone Catleyam cf. Icon. bot. Reg. t. 953." Specimen videtur iconi inservisse. Pseudobulbus oblongo ligulatus levissime paucicarinatus, nitidissimus cicatrice folii latissima. Vaginae foliorum stipantium tres. Pedunculi vaginae glumaceae erectae sex; portio florida brevis. Bracteae glumaceae tres illis plantae Warscewiczii bis terve longiores, scilicet duas pollicis tertias longae. Flos a vermibus prope destructus sepalorum tepalorumque spolia gerit pallidiora angustiora. Labelli — quondam vermibus deliciosi — residua labello plantae Warscewiczianae similia, nervorum rete idem. Folia cuneato oblongo acuta subpedalia, tres pollices lata.

Scheda haec offert: „1765. Pone Catleyam. Scapus 2—3 flor. Perianth. ex cinnamomeo flavescens, foliol. undulatis. Labellum sordide purpur. subrotundum, obcordatum, margine anteriore albo limbatum, medio discum incrassatum vernicosum ferens, appendice propria supra basin adauctum, mediante eodem cum gynostemio ad stigma usque connatum. Gynost. breve, 3 quetr. truncatum. Poll. mass. 2, cereac. caudicula lineari glandulae stigmatis conicae compressae acutissimae affixae."

Cuchero Febr. 1830.

Huc includatur: *Brassia* R. Br. H. K. ed. 2. V. 215. Lindl. Fol. I. Decbr. 1853.

Sepala explanata, basi aequalia; lateralibus elongatis acuminatis saepius caudatis. Petala conformia, sepalo dorsali aequalia vel minora. Labellum planum, indivisum, cum columna continuum, basi bilamellatum, verrucis saepe antepositis. Columna nana aptera. Stigma excavatum. Pollinia 2, cereacea, postice sulcata; caudicula lineari arcuata; glandula ovali. Anthera Oncidii. Herbae epiphytae, pseudobulbosae, Americae tropicae. Folia pergamenea. Racemi radicales, simplices. Flores xanthini, speciosi.

A genus extremely near Oncidium, from which nothing in reality separates it except its very short, earless column, and entire bilamellate lip combined with elongated lateral sepals. The inflorescence of Oncidium is however usually branched. Ada is readily known by its closed perianth, lip, caudicle, and gland; Miltonia by its auriculate column firmly blended with the base of the lip.

Subdivisions of the genus.

§. A. *Eubrassia.* Bracts short and inconspicuous.
  1. Lip quite even.
  2. Lip verrucose.

§. B. *Glumaceae.* Bracts long, herbaceous.

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§. A. 1.

116. — a. — ONCIDIUM BRASSIA Rchb. fil. Mss. Lindl. Fol. l. c. p. 1: *Brassia maculata* R. Brown in Hort. Kew., V. 215. Bot. Mag., t. 1691:

B. sepalis lateralibus labello duplo longioribus, petalis acuminatis labello subaequalibus, labello paulo breviore supra basin oblongam in limbum subrotundum expanso, lamellis disjunctis simplicibus apice dentiformibus basi villosis.

(A.) Flowers large, pale yellow, with a nearly white lip, spotted below the middle with purple.

B. guttatum Rchb. fil.: (B.) *guttata*. Flowers much smaller, and greenish, with spots distributed pretty equally over the surface.

B. guttata Lindl. in Plant. Hartw., 94.

B. Wrayae Hooker in Bot. Mag. t. 4003.

I am afraid there is no doubt about all these plants being the same. The identity of B. maculata and guttata has been overlooked, I presume, in consequence of the figure in the Bot. Mag. having been represented with revolute sepals and petals, a circumstance unknown among Brassias. I have lately had an opportunity of examining a specimen in the possession of his Grace the Duke of Northumberland, and I find that this part of the figure is wholly erroneous. The sepals and petals are straight, and in the usual state of disproportion remarked in the genus. It is much handsomer, and more rare than guttata; which, however, is a fine variety, with greenish yellow flowers spotted with purple or green; these vary greatly in size; in Hartweg's wild specimens from the Chono they are very small, in a specimen found by Mr. Skinner at San Salvador twice as large, and in a specimen before me, from the garden of the Horticultural Society, larger than even the last.

Wild A, in Jamaica—R. Brown, Purdie; B, Guatemala—Skinner, Hartweg etc.

116. — b. — ONCIDIUM SUAVEOLENS Rchb. fil. Mss. Lindl. Fol. l. c. p. 2: *Brassia Lanceana* Lindl. in B. R. t. 1784. B. M. t. 3577. Ib. 3794 (?).:

B. petalis labello aequalibus acuminatissimis, labello oblongo-lanceolato acuminato undulato basi pubescente, lamellis pilosis disjunctis proclivibus cornubus 2 cum dente intermedio antepositis.

(A.) Flowers bright yellow, sweet-scented, spotted with brown; the lip whole-coloured. Lateral sepals not twice as long as the lip.

(B.) *macrostachya*. Flowers bright yellow, slightly spotted with brown; lip much paler. Lateral sepals very acuminate, three or four times longer than the lip.

B. macrostachya Lindley Sert. Orchid. t. 6.

(C.) *pumila*. Flowers pale yellow, stained with dull purple at the base of the sepals, which are clear yellow. Lip contracted in the middle, dirty yellowish brown at base, more than half as long as the lateral sepals.

B. pumila Linden Bot. Reg. 1845. Misc. 62.

That all these plants are forms of the same species is I fear undeniable, notwithstanding the great differences in colour and the size of the parts, especially in the length of the lateral sepals, which in macrostachya are five or more inches long. All are very near B. caudata itself, but appear to want the subulate point of the lip, and the aristate sepals of that species. From B. Lawrenceana the three teeth (two like horns, one small and intermediate) standing upon the sloping lamellae may be regarded as the main differences. As to pumila which has pale yellow flowers stained with dull purple at the base of the petals, but no purple on the sepals, and the lip very slightly tinted, it is remarkable for a pair of somewhat transparent teeth which stand up in front of the two little customary lamellae.

Wild in the West-Indies; A. Surinam—Lance; B. Demerara—Loddiges; C. Caracas—Linden.

Obs. Brassia pumila Lindl. l. c.:

Foliis binis patulis elongato-lanceolatis, canaliculatis, sepalis linearilanceolatis acuminatis inferioribus labello longioribus, labello pandurato acuminato subundulato basi bicarinato dentibus ante carinas 2 acutis clavatis aucto.

Dwarf. Pale yellow flowers stained with dull purple at the base of the petals; but there is no purple on the sepals and the lip is very slightly tinted. It seems to be peculiar in the large size of the pair of somewhat transparent teeth which stand at the base of the lip; but it may be a var. of Brassia Lanceana. Its aspect is however widely diff. — Barker.

116. — c. — ONCIDIUM LAWRENCEANUM Rchb. fil. Huc Lindl. Fol. p. 2: *Brassia Lawrenceana* Lindl. in Bot. Reg. 1841, Misc. 6, t. 18:

B. sepalis lateralibus labello duplo longioribus, labello oblongo-lanceolato acuminatissimo undulato, lamellis 2 pubescentibus antice connatis truncatis.

(B.) *angusta*. All the parts very narrow; the lip aristate with a tendency to become concave.

B. cochleata Knowles and Westcott, Fl. Cab., t. 58.

B. angusta Lindl. in B. R., 1844, Nr. 3.

Except size and colour I find no safe mark by which to distinguish A and B. Both are very sweet-scented. The former has bright yellow flowers, spotted with cinnamon; the latter has all the parts narrower, they are dirty yellow with a uniform dull brown stain on the lower half of the petals, and a few dull brown spots near the base of the lip. Both are occasionally received among collections formed in Brazil; if B. cochleata is the same as angusta, which I can hardly doubt, then it would seem to be from Demerara. The truncate double lamella, with no additional teeth in front, affords an easy mode of identifying the species, and separates it especially from B. Lanceana.

Huc: *Brassia angusta* Lindl. Bot. Reg. 1844. (XXX.) Misc. 13:

Pseudobulbis oblongis ancipitibus, foliis binis oblongis sessilibus undulatis racemi longitudine, sepalis linearibus, acuminatis, labello lineari-lanceolato acuminato lamellis baseos connatis pubescentibus antice denticulo auctis.

Brazil.

Extremely narrow sepals and lip, which are of a pale dull yellow, with little marking, except a few brown spots at the base of sep., pet. and lip. In this respect it varies, for in some cases the spots at the base of the petals are few and distinct, in others they run together into brown.

Huc: *Brassia cochleata* Knw. Westc. Fl. Cab. II. 53. (1838):

Pseudobulbs ovate oblong, furrowed, the base clothed with sheathing leaves, the apex bearing 2 leaves. Leaves linear lanceolate, acute keeled. Scape racemose, pendulous. Sepals as petals plane, not undulated, pale green, elegantly marked with brown. Lip elongated, striated, marked with white and brown dots, somewhat constricted in the middle, then forming a spoon-like cavity and terminating in lengthened, somewhat recurved apex. Bracteas small.

Demerara „on the banks of the Demerara river, some forty miles from its mouth." Henchman.

— BRASSIA BIDENS Lindl. cf. infra.

116. — d. — ONCIDIUM CAUDATUM. Huc: Lindl. Fol. p. 3: *Brassia caudata* Lindl. in Bot. Reg. t. 832. L..O. 212. Bot. Mag. 3451:

B. sepalis lateralibus longissimis acuminatissimis, petalis labello vix longioribus, labello ovato-oblongo apice subulato, lamellis pubescentibus apice liberis dentiformibus.

Epidendrum caudatum L. sp. pl., 1349.
Malaxis caudata W. sp. pl., iv. 93.

The shortness of the petals, which are not longer than the labellum, and the very great length of the lateral tail-like sepals are peculiar. The flowers are dull yellow, spotted with broad brown blotches. In Regel's Brazilian specimens, which are very ill-preserved and referred here with some doubt, the lip is obovate and extended into a long bristle-shaped point.

Wild in the West-Indies; Brazil—Regel?

116. — e. — ONCIDIUM PERUVIANUM Rchb. fil. *Brassia peruviana* Pöpp. Endl. Gen. Sp. II. t. 117. Lindl. Fol. p. 3:

B. foliis elongatis acutissimis, „sepalis anguste linearibus acuminatissimis aequalibus; floribus resupinatis, labello oblongo lanceolato acuto undulato crenulato" sepalis subaequali unguiculato basi bicalloso.

I have never seen anything like this plant. The flowers are represented as growing in one-sided spikes, not exceeding ten in number, about an inch apart, yellowish-green spotted with purple. The perfect equality of the sepals and petals, if it really exists, is a very peculiar feature of the plant, as is also the unguiculate lip.

Wild in Peru; in dry thickets on the eastern face of the Andes, in the district of Chihuamccala, towards Cuchero—Pöppig.

116. — f. — ONCIDIUM WAGENERI Rchb. fil. Mss. Huc: *Brassia Wageneri* (Pandurabilia squamibracteata) Rchb. fil. Bonpl. I. 14:

Sepalis tepalisque linearilanceolatis setaceo acuminatis, his subaequilongis seu paulo brevioribus (in floribus infimis), labello a basi utrinque rotundata angustato, dein apicem versus rotundato dilatato demum in apicem longiusculum cuspidatum attenuato, carina basilari profunde sulcata, apice utrinque dentato truncata, basi velutina, carinulis triangulis dentiformibus apici carinae appositis, ulterius progredientibus.

Eine stattliche Pflanze mit langen Trugknollen, über fusslangen, ziemlich spitzen Blättern. Die über fusslange Aehre trägt Blüthen von der Grösse derer der B. Lanceana. Sie sind nach dem beiliegenden Gemälde hellgrün, die Tepala am Grunde schwarzbraun, die untere Hälfte der Lippe mit schwarzbraunen Fleckchen. Ich lege besonderes Gewicht bei Aufstellung dieser Art auf die langen Tepala, welche länger oder gleichlang sind mit der ausgezeichnet fein gespitzten Lippe. Caracas. 5000'. April. Wagener.

Rchb. fil. Bonpl. II. 280. Ocanna: Teorama. Juli. 8000'. Nr. 785. Schlim.

116. — g. — ONCIDIUM VILLOSUM Rchb. fil. Huc: *Brassia villosa* Lindl. l. c. p. 4:

B. floribus subcarnosis, sepalis petalisque subaequalibus immaculatis, labello ovali apiculato convexo disco pulverulo, lamellis villosis abbreviatis apice confluentibus verrucis 4 oblongis oblique antepositis.

Flowers smaller and much more fleshy than in any other of the genus („very sweet-scented" — W.). The four warts placed obliquely in front of a short, shaggy, double lamella are very peculiar.

Wild at the sources of the Marannon—Warscewicz.

Huc: *Brassia hexodonta* Rchb. fil. Warscew. Bonpl. II. 98:

Aff. B. Warscewiczii callis in basi labelli quadrigeminis, antepositis 2 lamellatis. Pedunculus multiflorus, parviflorus, secundiflorus, bracteae ovatae acutae ovario pedicellato 3.—4. breviores, flores inversi, sepalum summum oblongolanceolatum, lateralia paulo angustiora, paululum longiora, tepala lanceolata acuminata, labellum a cuneata basi ovatum antice acutum, nunc subtiliter lobulatum, disco punctulato velutinum, basi sexcallosum, calli 4 postici biseriati, obtuse trianguli, sinu interjecto puberulo, calli 2 antepositi lamelliformes, semirotundi, velutini; gynostemium humile, antice utroque apice acutangulum. Nächst B. Warscewiczii, welche völlig verschiedene Schwielen am Lippengrunde trägt. Peru. v. Warscewicz.

116. — h. — **ONCIDIUM GIREOUDIANUM** Rchb. fil. Mss. Huc: *Brassia Gireoudiana* Rchb. fil. Warscewicz, Rchb. fil. Gtz. — Xenia p. 70:

Aff. Brassiae guttatae Lindl. sepalis labello ter — quater longioribus, labello a basi latoligulata utrinque obtusangula subito dilatato, hac parte triangula anteriori basi utrinque rotundata, lamellis quintae labelli aequilongis carinaeformibus velutinis, basi obtusangulis, tum humilioribus, dein acutangulis, demum semiovatis.

?Sub: *Brassia maculata* R. Br. *B. guttata*: in a specimen found by Mr. Skinner at San Salvator the flowers are twice as large" Lindl. Fol. V. Brassia p. 2.

Brassia Gireoudiana Rchb. fil. Wzw. in Otto und Dietrich Allg. Gartenztg XXII. 1854. Nr. 35. p. 273.

Pseudobulbus prope spithamaeus, oblongo anceps, articulus superior Brassiarum more nunc manifeste evolutus. Folia a cuneata basi oblonga, obtuse acuta. Pedunculus usque bipedalis et tredecimflorus. Flores infimi ab apice supremi sepali ad apices sepalorum lateralium septem — octopollicares. Sepala linearia longe caudata, lateralia dorsali longiora flavoviridia, demum flava fasciis paucis nunc interruptis purpureo atroviolaceis in basi. Tepala dimidio sepalo dorsali aequalia linearia acuminata dimidio inferiori purpurea atroviolacea. Labellum basi oblonga subito cordato oblongove dilatatum acutiusculum ejusdem coloris, maculis quibusdam violaceo atropurpureis. Carinae basilares bipartitae: laminae posticae basilares a basi altiori descendentes, hinc obtuse triangulae, intus aurantiaco velutinae. Gynostemium basin versus magis antrorsum proclive, dum in B. guttata Lindl. rectum.

Diese prächtige Art, welche an Grösse den schönsten Formen der *B. brachiata* Lindl. gleichkommt, entdeckte Herr von Warscewicz in Costa Rica.

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§. A. 2.

116. — i. — **ONCIDIUM BRACHIATUM** Rchb. fil. Mss. *Brassia brachiata* Lindl. Pl. Hartw. 94. *B. R.* 1847. n. 29. Lindl. Folia l. c. p. 4:

B. sepalis longissimis (semipedalibus), labello verrucoso basi rotundato dimidio superiore subcordato acuminato undulato vena media leviter carinata, lamellis simplicibus glabris apice triangularibus erectis.

The finest species of the genus, with pale green flowers, studded on the lip with green warts, and many rich brown oblong spots on the sepals and petals. I have seen cultivated specimens measuring twelve inches from the point of the dorsal sepal to that of one of the laterals. The wild specimens are much smaller. The great heart-shaped upper half of the lip, and the smooth lamellae, clearly distinguish the species from B. verrucosa.

Wild in Guatemala; Hacienda de la Laguna—Hartweg.

Huc: *Brassia brachiata* Lindl. (Verrucosae) Rchb. fil. Bonpl. III. 215:

Aff. B. verrucosae labello a basi late ligulata cordato acuto, papuloso, carinis 2 parallelis nec contiguis, in basi vere continuis; apice acutangulis, basi intus velutinis.

Sepala lanceo acuminata semipedalia. Tepala subaequalia tres quartas illorum attingentia. Labellum a basi late cuneata ligulatum margine crispulum revolutum antice hastato triangulum utrinque rotundatum crispum. Carinae 2 parallelae a basi altiori rotundata non interrupti antice angulati, basi intus velutini. Verrucae crenaeque incrassatae per discum. Gynostemium humile. Perigonium citrino-albidum. Partes inferiores atropurpureo guttatae. Labellum aequale, basi carinarum intus aurantiaca. Flos demum per labelli discum purpureus more B. verrucosae. Klein blüthige Formen sind sehr häufig in unsern Sammlungen — die ganz grossblüthige erhielten wir nur aus Hrn. Pescatore's Sammlung.

116. — k. — ONCIDIUM VERRUCOSUM Rchb. fil. Mss. Lindl. F. l. c. p. 4:

B. sepalis lateralibus longissimis, petalis anguste caudatis, labello obovato-lanceolato acute verrucoso, lamellis villosis antice bidentatis recurvis.

? *B. odontoglossoides* Klotzsch in Bot. Ztg. 1847, p. 912.
B. coryandra Morren in Ann. Gand., IV. 295.
B. Cowani Hort.

Flowers many times larger than in B. aristata, on long slender scapes, pale green except the lip which is white with green warts. It is impossible to doubt that Morren's B. coryandra is to be referred here, for although in his specific character, speaking of the lip, he says, „tuberculis nullis," yet this is entirely contradicted in his French text. Since no such Brassia is known to inhabit Brazil, the statement that the plant came from St. Catharine seems to have been a mistake.

Wild in Guatemala—Barker.

Huc: *Brassia aristata* Lindl. l. c. p. 4:

B. sepalis lateralibus labello quadruplo longioribus, petalis brevioribus ex ovata basi acuminatis aristatis, labello obovato basi angustato sub apice aristato secus medium verrucoso: lamellis glabris apice liberis (nunc bidentatis) divergentibus rotundatis.

B. longiloba Alph. DC., 10 not. pl. rar. Genev. t. I. A. (1847.)

Flowers among the smallest in the genus; according to M. De Candolle with a white lip and green sepals and petals slightly spotted with purple. Very distinct in the petals ending in bristle points and in the presence of a distinct awn beneath the point of the obovate warted labellum.

Wild in Guatemala—Skinner.

116. — l. — ONCIDIUM BIDENS Rchb. fil. Mss. Huc: *Brassia bidens* Lindl. B. R. 1844, Misc. Nr. 6. L. F. p. 3:

B. sepalis lateralibus labello duplo longioribus, labello rhombeo undulato petalis breviore, lamellis laevibus rectis appendice membranacea biloba in fronte.

This is nearly allied to B. caudata, from which it differs in its longer petals, in the form of its lip, and in having two large teeth connected at their base in front of the lamellae, which are quite smooth. The lip is spotted with brown on a yellow ground. The sepals and petals appear from the dried flower to be unspotted. Regel's specimen is much mutilated, but seems to belong here.

Wild in Brazil—Harrison; Regel Nr. 694.

§. B. Glumaceae Lind. l. c.

BRASSIA CINNAMMOMEA Lind. = *Onc. Keilianum* Rchb. fil. N. 116. — q. —

116. — m. — ONCIDIUM OCANENSE Rchb. fil. Mss. — Lindl. F. p. 5.: *Brassia ocanensis*:

B. racemo paucifloro, bracteis herbaceis acuminatis ovario multo longioribus, sepalis carinatis petalisque ovato-linearibus obtusis carnosis recurvis subaequalibus, labello oblongo acuminato basi cuneato lamellis convexis pilosis dentibus 2 subrotundis glabris antepositis.

Resembles B. glumacea, but the bracts are longer, the sepals and petals short blunt, and the front teeth of the lamellae almost globular.

Wild in N. Grenada, in the province of Ocanna—Schlim.

116. — n. — ONCIDIUM GLUMACEUM Rchb. fil. Mss. Lindl. Fol. p. 5.: *Brassia glumacea* Lindl. Orch. Lind. p. 17:

B. racemo paucifloro, bracteis herbaceis carinatis ovario aequalibus, sepalis linearibus acuminatis subaequalibus, petalis conformibus bre-

vioribus, labello brevi ovato acuminato convexo, lamellis glabris depressis apice obtuse runcinatis.

Flowers yellow spotted with red. The lamellae are perfectly smooth. Leaves not longer than the racemes, scarcely an inch and quarter broad.

Wild in Merida; from damp forests at the height of 5600 feet—Linden. 646.

116. — o. — ONCIDIUM IMBRICATUM Rchb. fil. Mss. — L. F. p. 5.: *Brassia imbricata*:

B. racemo paucifloro foliis breviore squamis imbricatis acuminatis vaginato, bracteis herbaceis carinatis ovario aequalibus, sepalis petalisque a lata basi setaceo-acuminatis, labello oblongo plano acuminato lamellis pubescentibus depressis apice in dentes assurgentibus.

Very like a larger form of B. glumacea; but the leaves are not only full two inches wide, but much longer than the flowering stems. The sepals and petals are also finer pointed, and the lamellae are conspicuously downy.

Wild in Sa. Martha—Purdie.

Rchb. fil. Bonpl. III. 66. Pflanze wie die der *Brassia Keiliana* Rchb. fil. Blüthe braun gefleckt. 5000'. Ocanna. Wagener.

117. — p. — ONCIDIUM CINNABARINUM Rchb. fil. Mss. Huc: *Brassia cinnabarina* Lind. Mss. Lindl. Fol. p. 6:

B. bracteis ovatis cordatis acutis ovario brevioribus, sepalis petalisque lanceolatis acutis, labello oblongo lanceolato acuminato glabro lamellis flexuosis venas incrassatas referentibus medio dente obtuso auctis.

Flowers very brilliant orange-red, an inch and half long before expansion. The lamellae have the appearance of a pair of thick veins extending to two-thirds the length of the lip, and furnished each with a blunt tooth about the middle.

Wild in New-Granada; in the provinces of Soto and Ocanna at the height of 9000 feet—Schlim. 1035.

Rchb. fil. Bonpl. II. 280: Ocanna. Januar 5—6000'. Eine durch brennendes Roth und schöne Deckblätter höchst ausgezeichnete Pflanze. Nr. 403. Schlim.

Rchb. fil. Bonpl. III. 66. Ocanna. März. 5000'. Wagener.

116. — q. — ONCIDIUM KEILIANUM Rchb. fil. Mss. Huc: *Brassia Keiliana* Rchb. fil. in Paxt. Fl. Gard., 1852, Nr. 585. B. Z. 1852, p. 761. L. F. p. 6:

B. spica pauciflora, bracteis navicularibus ovaria superantibus, sepalis lineari-lanceolatis acuminato-aristatis petalis brevioribus, labello oblongo-lanceolato undulato acuminato, lamellis erectis utrinque obtusangulis basin versus velutinis antice in auriculas excurrentibus, columna basi angustata.

Sepals yellow, then beautifully brownish orange; cinnabarine when dried, lip whitish. Very near B. cinnabarina, from which it is readily known by its long navicular bracts.

Rchb. fil. Bonpl. II. 280: Santa Marta. Wälder von Minca. 5000'. Juni 988. Schl.

116. — r. — ONCIDIUM SPATHACEUM Rchb. fil. Mss. Huc: *Brassia spathacea* Lind. Rchb. fil. Bonpl. II. 279:

Aff. Brassiae imbricatae Lindl; vaginis pedunculi distantibus, bracteis spathaceis acutis flores integros aequantibus, labello ovali acuminato acuto ante carinas geminas postice obtusangulas, antice unidentatas puberulas disco incrassato.

Folium oblongoligulatum acutum prope tres pollices latum, subbipedale. Pedunculus folio aequalis, basi vaginis duabus, dein racemo septemfloro. Sepala ac tepala subaequilonga lanceolata acuminata pollicaria, flava, rufo maculata. Labellum duas tertias sepalorum aequilongum. Gynostemium basi membranaceo dilatatum (more *Br. cinnabarinae* Linden). — Wälder Ocannas: 6—7000'. Juli. Nr. 785. Schlim.

116. — s. — ONCIDIUM HELENAE Rchb. fil. Mss. Huc: *Brassia Warscewiczii* Rchb. fil. in Bot. Zeit., 1852, Oct. 1.· Lindl. F. l. c. p. 6:

B. bracteis triangulis concavis acutis pedicellis brevioribus, petalis a lata basi acuminatis labello aequalibus, labello medio velutino oblongo acuminato basi cuneato lamellis distinctis apice retrorsum falcatis puberulis.

Flowers said to be the size of B. glumacea. The velvety lip is very peculiar. The upper sepal is described as being lanceolate acuminate with a broad base.
Wild in Equador; near Punt St. Helena and Tipi Happa—Wcwtz.

Brassia Warscewiczii Rchb. fil. l. c. p. 693:

Pedunculo multifloro (—15.), floribus parvulis (illos Br. glumaceae aequantibus), inversis, secundis, bracteis triangulis, concavis, acutis, pedicellos non aequantibus, perigonii phyllo supremo lanceolato acuminato, basi dilatato, phyllis lateralibus externis subaequalibus, longioribus, lateralibus internis triangulo-lanceolatis, a lata basi acuminatis, quam phylla externa brevioribus, labello aequalibus, labello oblongo acuminato, basi cuneato, per totum discum valde velutino, lamellis baseos distinctis, basi rotundato-elevatis, apice retrorso-falcatis, papillis puberulis; gynostemio humili a foveae stigmaticae basi labellum versus antrorsum oblique decurrente.

Die Blüthentraube gewährt die Erscheinung, dass die unteren seitlichen Hüllblätter alle nach einer Seite, die oberen nach der anderen gelegt sind. — Ich kann mit dieser Art nur zwei in Beziehung bringen, die obscure *Br. pumila* Barker scheint Herr Prof. Lindley mit der mir wohlbekannten Br. angusta für identisch zu halten (very near Brassia angusta). Sie hat ein labellum panduratum und vor den Kielen keulige Zähne. Br. glumacea dagegen zeichnet sich durch die sehr langen Deckblätter und bedeutend langgestielte Fruchtknoten sogleich entschieden aus, auch hat sie eine ganz kahle Lippe. Ecuador am Punt St. Helena und bei Tipi Happa. 1000—2000'. April.

116. — t. — ONCIDIUM RACEMOSUM Rchb. fil. Mss. Huc: *Solenidium* Lindl. Orch. Linden. 1846. N. 79. p. 15:

Sepala et petala aequalia, explanata, libera. Labellum ungue longo canaliculato apice bidentato, lamina subrotundo ovata obtusissima. Columna aptera haud pede producta, alata, apice biloba, lobis lateralibus rotundatis dorsali lacero. Pollinia 2, cereacea, in caudicula incumbentia, glandula parva subrotunda.

Folia ensiformia, tenuia, basi angustata. Racemus laxus multiflorus. Bracteae minutae, pedicellis gracilibus, sigmoideis pluries breviores.

This curious genus is near Oncidium and Brassia, from both of which it is distinguished by it narrow stalked wartless lip, threelobed antherbed, and very peculiar pollenmasses, which are bent down upon their caudicle while in the anther.

Solenidium racemosum. „An epiph. from forests near Pamplona, at the height of 8500'. Nov. Flowers yellow, spotted with red.

Paxt. Fl. G. III. 102: The main difference between Solenidium and Oncidium consists in this: column is earless, has a thin membranous border, terminating upwards in a thin triangular tooth, and rounded of above the base; beneath the lower end of the column stand a pair of distinct but minute glands, which must be analogous to the column ears of Oncidium if there is any analogy between them. The crest of the lip which in Oncidium is amplected of 3 or some other uneven number of tubercles is here replaced by a pair of long feathery plates, which stand considerably above the lip itself, and being free at the end look in profile like a pair of shaggy ears. All this is very unsuccessfully represented on our plate.

Ex „Leochilis" huc pertinent:

116. — u. — ONCIDIUM HERBACEUM Rchb. fil. Mss.: *Leochilus herbaceus* Lindl. Bot. Reg. XXX. (1844.) Misc. 90:

Labello obovato emarginato apice denticulato medio convexo laevi basi excavato villoso.

La Guayra imp. by Wailes of New-Castle. Sepals and petals are green with a single red stripe along the middle. The lip is white slightly tinged with green and irregularly banded with pale purple. It differs from L. oncidioides in the form and surface of the lip. I believe too that the flowers are in pairs; but I have only seen fragments.

116. — v. — ONCIDIUM SCRIPTUM Rchb. fil. Mss.: *Cryptosanus* Scheidw. Gartenztg. 1843, p. 101. Lindl. B. R. XXIX. (1843.) Misc. 122:

Perianthium explanatum, sepalis petalisque subaequalibus, sepalo supremo fornicato, labello indiviso oblongo apiculato, disco calloso, cum basi columnae accreto, saccato; sacculi ore ciliis densis cincto; columnae brevis clavatae apice auriculato. — Anthera unilocularis, pollinia 2, pyriformia postice sulcata, caudicula subulata, glandula oblonga.

Pseudobulbs oneleaved, compressed, twoedged. The leaf is lanceolate, coriaceous, opaque, mucronate. The racemes are axillary; the bracts subulate and very small; flowers 2—3 on each stalk, scentless, small, green, with sanguine spots and lines.

Huc: *Leochilus scriptus* Rchb. fil. Xen. I. p. 15. Tab. 6. IV. 21:

Affinis L. herbaceo labello apice integro basi carinato, carina apice et basi biloba, basi papillosa villosa.

Cryptosaccus scriptus Scheidw.! (errore typographico Cryptosanus legitur) Allg. Gartenztg. 1843. p. 101.

Pseudobulbi compressi, ancipites monophylli, folium lanceolatum mucronatum coriaceum. Racemus axillaris bi-triflorus. Bracteae subulatae brevissimae. „Flores inodori, virides: sepala sanguineo longitudinaliter unistriata, tepala aequaliter striata et cum labello sanguineo guttulata" (Scheidw. l. c.). Sepala oblongo lanceolata acuta; tepala subaequalia angustiora, breviora. Labellum cuneato obovatum apice retuso bilobum: callus a basi per tertiam infimam apice et basi obtuse bilobus, pube papillosa inter lobos basilares; gynostemium medio utrinque lineari obtuseque divaricato brachiatum.

116. — w. — ONCIDIUM CARINATUM Knowl. Wescott. Fl. Cab. II. 1838. p. 81:

Pseudobulbis ovatis; foliis lanceolatis, scapo erecto, floribus secundis racemosis; petalis conniventibus, maculatis; pedicellis flexuosis; labello cristato integerrimo; bracteis scariosis.

Although not strictly agreeing with the generic character of Oncid, we consider it one of those exceptions mentioned by Dr. Lindley, in the Bot. Reg. which come too near it to be separated. It differs from O. in having the wings of the column in the centre instead of the apex; but the pollenmasses, caudicula and gland are certainly those of Oncid. The labellum is also entire and kealed from the apex. It appears allied to O. gracile. Xalappa.

Leochilus carinatus Bot. Reg. 1842. Misc. 22:

Oncid. carinatum Knowles and Westcott l. c.

Pseudobulbis ovatis, foliis lanceolatis, scapo erecto, floribus secundis racemosis, sepalis petalisque linearibus disjunctis, labello lineari oblongo emarginato basi mellifero cristato, lamellis 2 brevibus truncatis utrinque glandulis 2 filiformibus auctis.

Xalappa in Mexico.

Flowers orange, petals spotted, the sepals wholecoloured, the lip yellow with a few orange spots.

§. 9. Pulvinata Lindl. l. c. p. 35.

Analysis of the species.

Pulvinus villosus inappendiculatus.
 simplex.
  labelli lobis lateralibus serratis . . . . 117. *sphegiferum.*
  „ „ „ crispis . . . . 118. *pulvinatum.*
 quadrilobus, lab. lob. lat. integris . . . . 119. *divaricatum.*
Pulvinus dentibus 5 ascendentibus circumdatus . . . . 120. *Harrisonianum.*

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117. ONCIDIUM SPHEGIFERUM Lindl. in Bot. Reg. 1843., Misc. 23. Paxt. Fl. Gard., II. ic. 124:

Flowers brilliant yellow, with rich crimson spots on the lip, and a dull purple stain on the sepals and petals. Base of the lip flat and serrated, not crisp; cushion-like crest, oblong obovate, not circular.

Wild in Brazil—Loddiges etc.

Lindl. l. c.:

Panicula ramosa divaricata, sepalis distinctis acutis, petalis retusis, labelli lobo intermedio bilobo transverse oblongo unguiculato lateralibus serratis subaequalibus, tuberculo villoso ovato pulvinato, columnae alis firmis rotundatis.

A Brazilian species, intermediate as it were between O. divaricatum and pulvinatum, of which it has quite the appearance and colour; it is however clearly distinguished by the lateral lobes of the lip being serrated, and by the rounded firm purple wings of the column. Flowered with Messrs. Loddiges.

118. ONCIDIUM PULVINATUM Lindl. in Bot. Reg. 1838. Misc. 115. 1839. t. 42. Paxt. Fl. G., II. ic. 126:

Much like the preceding, from which the crisp base of the lip, circular cushion, and broad middle lobe of the lip appear to separate it.

Wild in Brazil; Minas Geraës—Regnell.

Lindl. B. R. l. c. Misc. 115:

Panicula ramosissima divaricata, sepalis obovatis, lateralibus liberis, petalis conformibus acutis, labelli lobis subaequalibus, intermedio bilobo undulato lateralibus crenatis rotundatis crispis, disco pulvinato villosissimo, columnae alis rotundatis.

Resembles O. divaricatum with a panicle 8—9' long, imported from Brazil by Rich. Harrison, Esq. of Aigburgh, to whom a medal was awarded for his exhibition of it at a recent meeting of the Hort. Soc. of London.

Hook. Lond. Journ. 1842. 1. p. 169: on large trees, in virgin forests, on the Corcovado. Septbr. Gardner.

Lindl. Bot. Reg. XXV. (1839.) 42:

Panicula ramosissima intricata, glabra, 8—9' longa; axi percurrente rectiusculo, pennae corvinae crassitudine, ramis simplicibus ramosisque divaricatis, geniculatim flexuosis internodiis pollicaribus, bracteis refractis membranaceis acutis pluries longioribus.

Flores O. divaricati simillimi, lutei, in medio sanguineo guttati. —

It differs from O. divaricatum in its lip having the middle lobe largest, not smallest; and in the cushion at its base being much more villous and equally convex, not divided into equal quarters. The lateral lobes of the lip are also crisp in this species, not plain, as in O. divaricatum.

Lindl. Sert. sub 48: perhaps a variety of Oncidium divaricatum.

Huc: *Oncidium sciurus* Scheidw. Allg. Gartztg. 1839. p. 496:

Petala et sepala aequalia, ovata, apice mucronulata, sepala concava, libera, omnia unguiculata, flava, ad basin fusco purpurea, labellum trilobatum, lobis lateralibus rotundatis, maculis rotundis purpureis variegatis, intermedio amplissimo, reniformi undulato cuprato, postice maculis binis transversis, discus barbatus, aurantiacus, albovariegatus. Columna alba, alata, apice parum incrassata, rostellum porrectum, figuram sciuri refert. Folia maxima, 12—14 pollicaria, lanceolata, basi plicata, carinata, carnosa; scapus radicalis debilis, ramosus, quinquepedalis et ultra. Flores speciosi, subpollicares, lutei, fusco-purpurei maculati.

Brasilia. c. at Laeken. Scheidw.

119. ONCIDIUM DIVARICATUM Lindl. Orch. 205. Bot. Reg. t. 1050. Bot. Cab. t. 1212:

The short concave coriaceous leaves assist in separating this from the preceding, as does the entire flat edges of the lateral lobes of the lip. I also believe the four lobed cushion to afford a good mark. The flowers are sometimes yellow with a great deal of copper-red staining and spotting, and sometimes of one uniform dull coppery tint.

Wild in Brazil; trunks of high trees, on the mountains of Serra das Argeas, in Ilha Grande—Descourtilz.

120. ONCIDIUM HARRISONIANUM Lindl. Orch. 202. Bot. Reg. t. 1569. L. F. p. 35:

O. pallidum Lindl. in Bot. Reg. 1840. Misc. 108.

O. pantherinum } Hoffmgg. fide Rchb. fil.
O. pentaspilum }

O. raniferum Hort. Germ., fide Klotzsch.

O. acrobotryum Klotzsch, in Allg. Gartenztg. Sept. 15, 1855.

The dull grey horn-like recurved leaves, and most remarkable crest, render it impossible to mistake this pretty little plant, whose brilliant yellow flowers are enlivened by rich crimson linear stains. It is not very unusual for Oncidia to have a terminal inflorescence, as in the O. acrobotryum of Klotzsch, which is unquestionably a mere monster of this.

Wild in Brazil; Organ Mountains—Miers; on the ascent of the S. de Piedade, province of Mines—Martius.

b. Bot. Reg. l. c.:

Pseudobulbi ovi passerini magnitudine, sed globosi, laete virides, laeves. Folia 4—6 pollices longa, omnino avenia. Scapus e squama tubulosa proveniens, ascendens, pedalis vel ultra. Panicula composita, apice cernua, ramulis divaricatis vel decurvis. Flores vitellini. Sepala petalis paulo majora, atrofusco maculata (uti pet.) Labellum unicolor, sepalis lateralibus longius. Crista e tuberculis 5 constat, quorum 4 lateralia, compressa, rotundata, leviter incurvantur; quintum anticum multo est angustius et cornu parvum refert; inter omnia adest area pulvinata pubescens.

Oncidium pallidum Lindl. Bot. Reg. XXVI. 1840. Misc. 108:

Pseudobulbo obcordato compresso marginato, foliis acute carinatis convexis oblongis caesiis, scapo erecto paniculato, sepalis petalisque oblongis obtusis liberis, labelli auriculis rotundatis lobo intermedio cuneato obovato emarginato angustioribus, disci basi glandulosi appendice 5 partita: laciniis cornutis aequalibus pubescentibus, columnae alis brevissimis oblique truncatis.

Brazil. imp. Lucombe, Pince & Co. of Exeter. Leaves sea green like those of Maxillaria Rollissonii; the panicle is almost a foot long, and the flowers are in colour similar to O. divaricatum. Very near O. Harrisonianum.

§. 10. Paucituberculata. L. F. p. 36.

*** The following plants are all that properly belong to this division. They have never an uneven number of lobes to the crest. O. serpens has two—and the others four. If in some other instances there are four principal tubercles only, it will be found that rudimentary ones occur either in front or at the sides, and indicate a tendency to the formation of five or more.

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121. ONCIDIUM SERPENS. Lindl. Orch. 204. Paxt. Fl. G., II. Ic. 125. L. F. 36:

This must be extremely rare, no other specimen having occurred among the numerous Peruvian collections seen by me, except that gathered by Col. Hall. The flowers are said to be yellow, spotted with dark brown.

Wild in Peru; Patacocha, road to Esmeraldas at 6000 feet, on trunks of trees—Hall.

122. ONCIDIUM HIANS Lindl. in Bot. Reg. 1838, misc. 121. Lindl. Fol. p. 36:

O. quadricorne Kloissch in Allg. Gartenzeit., Aug. 7, 1852.

O. leucostomum Hoffmgge. fide Rchb. fil.

A little species with small yellow brown flowers, and a great fleshy white erect four-lobed crest. The stigma is rostrate. The column has no cheeks.

Wild in Brazil—Hort.

Lindl. l. c. M. 121:

Sepalis petalisque aequalibus ovalibus obtusis leviter concavis, labello angusto auriculato medio contracto apice bilobo, callo disci bilobo utrinque dentato carnoso papilloso erecto columna parallelo eique longitudine aequali, alis columnae carnosis acutis vix falcatis.

I have only seen flowers of this little species, which comes near to O. carinatum. Mssrs. Rollissons received it from the vicinity of the gold mines in Brazil. It has small yellow and brown flowers with an extraordinary appendage to the lip, erect, white, fleshy, as long as the column, parallel with that organ, and resembling the 4 fingers of the hand a little hollowed out and closed together. This is quite a new modification of structure.

Huc: *Oncidium quadricorne* Kl. l. c.:

Pseudobulbis lenticularibus parvis monophyllis, foliis carnosis linearioblongis recurvis, acutis subsessilibus, dorso carinatis, basi attenuatis conduplicatis, paniculis basilaribus erectis filiformibus, perigonii foliolis patentissimis oblongo-obovatis sordide flavidofuscescentibus, labello elongato pandurato stricto, albido apice bifido, lobis lateralibus obsoletis, crista basilari erecta alba quadridentata, columnae nanae candidae alis erectis ovatis. — Labellum album.

123. ONCIDIUM STRAMINEUM „Lindl." in Bot. Reg. 1838. Misc. 63; 1840. t. 14. L. F. 36:

O. Columbae Hort.
O. Columbiae Hort. } fide Rchb.
O. Lindeni Hort.

Flowers straw-coloured, with a few dark specks on the lip, in a dense panicle. The sessile almost rectangular petals are very remarkable.

Wild in Mexico; near Vera Cruz—Hartweg.

Lindl. Bot. Reg. XXIV. (1838.) Misc. 63: *Oncidium stramineum* Bat. in litt.:

Ebulbe, foliis crassis carnosis ovato-lanceolatis acutis dorso rotundatis scapo paniculato rigido erecto brevioribus, sepalis subrotundis unguiculatis concavis liberis integerrimis, petalis duplo majoribus oblongis obtusis emarginatis margine crispis, labelli lobis lateralibus oblongis carnosis margine revolutis basi columnae proxima nectariferis intermedio reniformi plano emarginato majoribus, tuberculis disci 4 ge-

minatis, columnae alis carnosis linearibus obtusis elongatis genuflexis decurvis.

Sent from the neighbourhood of Vera Cruz to Hortic. Soc. by their collector, Mr. Hartweg. Pale straw-coloured flowers; about as large as those of O. flexuosum, with a faint smell of primroses. The base of the lower sepals, the lower part of the lip, the column, and a line along the origin of the petals are neatly dotted with brown. Honey is secreted by the lip at the base of the lateral lobes, next the column. Young plants are very like Oncidium pumilum, for which they may be mistaken, but they have much thicker leaves.

Bot. Reg. XXVI. 1840. 14: It was one of the first plants sent from Vera Cruz to the Hort. Soc. by Mr. Hartweg, who found it at a place called Zacuapan, where some other fine things (especially the rare and beautiful Berberis tenuifolia) were obtained. This species is readily known when out of flower by its rigid fleshy unspotted leaves rounded, not keeled, at the back.

124. ONCIDIUM CHEIROPHORUM Rchb. fil. in Bot. Zeitg. 1852. p. 695. Xen. ined. Lindl. Fol. p. 36:

A very curious plant nearly allied to O. stramineum. Flowers not a quarter the size, clear yellow, whole-coloured. Column with large falcate wings, curved downwards as in the Sarcopterous Pluritubercułate race, but not at all fleshy; in front it has a strong recurved tooth. Stigma rostrate. Crest of lip membranous, arched, and two-lobed in front, with a pair of teeth at its base. It exists in Senator Jenisch's garden in Hamburgh.

Rchb. fil. l. c. 695:

Phyllo summo oblongo cuneato, acuto, reliquis subaequalibus, lateralibus internis tamen paulo latioribus, labello basi utrinque acute auriculato, dein trilobo, utrinque in alam obtuse ligulatam divaricatam expanso, lobo medio producto subsessili bilobo, multo angustiori; callo depresso papyraceo antrorsum quadrilobo inter lobos divaricatos; gynostemii gracilis alis dolabriformibus, antrorsum minute serratis, falcula sursum curvata in basi gynostemii; anthera ac rostello ornithorrhynchis.

Niedliche Art. Blüthen „gelbgrün"; Lippe schön gelb, fast so gross wie die des O. ornithorrhynchum; mit dem die Pflanze grosse Aehnlichkeit besitzt. Trugknollen „rund, zweischneidig"; Blätter länglich, schmal, spitzlich; Rispe armblüthig, kurzzweigig, zart. Der Haken an der Seite ist ein neues Attribut, viel ausgezeichneter als die Zierrath bei *O. planilabre* Lindl.

Rchb. fil. l. c. 924: (basilata!). Diese Pflanze blüht jetzt bei Herrn Senator Jenisch unter der Cultur des Hrn. Kramer. Sie hat ein höchst eigenthümliches Ansehen. Das obere Hüllblatt deckt helmig die Säule, die seitlichen Lippenlappen stehen vertical herabgeschlagen, der Mittellappen der Lippe ist seitlich eingerollt. — Der wunderbare Zahn ist weiter nichts, als die bekannte unternarbige Leiste, welche auf überraschende Weise vorwärts und abwärts geschoben ist. Farbe dottergelb, äussere Hüllblätter grünlich, die seitlichen, unteren liegen neben einander, mit breiter Fläche an einander gedrückt unter der Lippe.

Wild in Veragua; volcano of Chiriqui—Warscewicz.

125. ONCIDIUM WARNERI Lindl. Fol. p. 38:

Odontoglossum Warneri Lindl. in Bot. Reg. 1845. Misc. 54; 1847. t. 20.

(A) *sordidum.* Sepals and petals yellowish, streaked with purple.

(B) *purpuratum.* Sepals and petals white, streaked with bright purple.

A plant with conical caespitose pseudobulbs, and recurved grassy leaves, longer than the short raceme. Lip bright yellow, equally four-lobed. Sepals and petals purple, equal, recurved at the points.

Wild in Mexico—Loddiges.

Lindl. Bot. Reg XXXI. 1845. Misc. 60:

Pseudobulbis ovatis ancipitibus subangulatis apice elongatis diphyllis, foliis patulis lineari-lanceolatis racemo paucifloro brevioribus, bracteis minimis, sepalis ovalibus patentissimis, petalis paulo angustioribus obtusis ascendentibus, labelli trilobi plani lacinia intermedia cuneata biloba lateralibus quadratis, tuberculo disci simplici, columna elongata aptera.

This little plant would be a very good Oncidium, if it had any wings to the column; it however approaches nearly some of the Columbian species of Odontoglossa, with which it will naturally associate. Its raceme is about a foot high, and bears seven or 8 distant flowers of a rich yellow, streaked with dull crimson along the middle of the sepals and petals. The pseudobulbs, which are nearly 2 inches long, are a pale sea green colour. — Exhib. May. 24. 45. by Warner. — Idem in Bot. Reg. 1847. 20. dicitur b. purpuratum. — Lindl. Bot. Reg. l. c. a. sordidum: sepalis petalisque lutescentibus purpureo striatis.

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§. Plurit uberculata. L. F. p. 37.

*** This large group, consisting as it does of species, or perhaps forms, exceedingly difficult to distinguish, may be classified in the following manner:

1. *Rostrata.* — A small number have the stigma extended into a long slender beak.
2. *Sarcoptera.* — Others have the column-wings fleshy, and curved downwards, with a somewhat glandular apex. All these agree in having the gland of the pollen hard, horny and furnished with a triangular erect process on each side of the sessile pollen-masses.
3. *Hymenoptera.* — The remainder have neither a rostrate stigma nor fleshy column-wings, and the pollen apparatus is in the usual state. A few have dimorphous flowers — *Heterantha*; in the rest the flowers are all alike — *Homoeantha*; the last again have column-wings nearly or very considerably obsolete — *obsoleta*; in others the column-wings are expanded into a conspicuous membrane — *expansa*.

Undoubtedly this is quite an artificial arrengement, with the exception of the Rostrata and Sarcoptera: but, in the present state of the genus, with so much more to learn as to the true value of characters, and the exact structure of the flowers of many, no other than an artificial arrengement seems to me to be attainable.

Analysis of the species.

I. Rostrata.

Columnae alis integris . . . . 126. *Boothianum.*
„ „ bipartitis hastatis, laciniis linearibus . . . . 127. *Weddelli.*
„ „ bilobis hastatis lac. acuminatis . . . . 128. *Schlimii.*
„ „ obtuse reniformibus . . . . 129. *tigratum.*

II. Sarcoptera.

Columnae alis bilobis.
Labellum basi et apice aequilatum. . . . . 130. *Carthaginense.*
„ „ angustius.
Cristae tubercula 5, v. plura . . . . 131. *luridum.*
„ „ 3, dentic. 2 adjectis . . . . 132. *haematochilum.*

Columnae alis integris.
Crista carinata dente valido utrinque . . . . 133. *Lanceanum.*
„ elevata linearis; tuberculis baseos 2, apicis 3 connatis.
Labellum basi et apice aequilatum . . . . 134. *Cavendishianum.*
„ „ angustius . . . . 135. *bicallosum.*

III. Hymenoptera.

A. Heterantha.

Labellum apice et basi aequilatum . . . . 136. *pentadactylon.*
„ basi multo angustius.
sepala et petala acuta . . . . 137. *cultratum.*
„ „ retusa . . . . 138. *retusum.*

B. Homoeantha: * *obsoleta.*

Bracteae magnae spathaceae: terminalibus convolutis . . . . . 139. *bracteatum.*
„ herbaceae haud solito majores.
Columna brevissima buccis cartilagineis alisque rotund. subaeq. 140. *fasciferum.*
„ „ basi uncinata; cristis rhomb. rostr. dentic. 141. *planilabre.*
„ elongata arcuata, buccis prominentibus
petalis latioribus unguiculatis . . . . 142. *tipuloides.*
„ sepalisque conformibus
143. *citrinum.*
144. *picturatum.*
Col. elong. semiteres, v. buccis fere obsoletis.
racemus pauciflorus simplex.
Columnae alae simplices . . . . 145. *Pardalis.*
„ „ utrinque duo distantes . . . . 146. *cardiostigma.*
panicula (vel racemus basi paniculatus).
Col. alae utrinque 2 distantes, crista basi lunata. . . . . 147. *tetrotis.*
„ „ rotundatae.
indivisae . . . . 148. *lentiginosum.*
lobatae.
panic. rami refracti . . . . 149. *lineoligerum.*
„ „ ascendentes . . . . 150. *altissimum.*
Columnae alae basi extensae obtusae.
folia ensiformia.
petala et sepala in alabastro apice recurva . . . . . 151. *sphacelatum.*
„ „ recta, col. alae multilobatae . . . . . 152. *Kappleri.*
folia oblonga obtusa; petala et sepala oblonga apiculata . 153. *caminiophorum.*
Columnae alae utrinque acutae . . . . 154. *Baueri.*

C. Homoeantha: ** *expansa.*

Volubilia.

Columna alae utrinque acutae, crista multifida . . . . 155. *Schillerianum.*
„ „ dolabriformes, crista carinata utrinque 4-dentata . 156. *Volvox.*

Recta.

Col. alae obtusae semicirculares v. parum oblongae.
racemus, labello sepalis multo longiore . . . . 157. *tigrinum.*

panicula erecta stricta.
sep. et pet. reflexa.
lab. basi et apice aequilatum, auriculis uncinatis . . . . 158. *reflexum.*
lab. basi angustius, auriculis rectangulis . . . . 159. *caesium.*
sep. et pet. oblonga patula . . . . 160. *pirarense.*
panicula divaricata.
crista convexa 5-tuberc. antice 2-cruris . . . . 161. *suave.*
„ rostrata utrinque denticulata . . . . 162. *ansiferum.*
„ „ dentibus 2 anticis maximis runcinatis . . . . 163. *microstigma.*
Col. alae triangulares.
panic. elong. angusta polyclada, bracteis spathaceis . . . . . 164. *polycladium.*
racemus effusus paniculatus.
foliis oblongis . . . . 165. *tenue.*
„ gramineis . . . . 166. *Suttoni.*
Col. alae valde obliquae apice acutae.
cristae lobis digitiformibus . . . . 167. *leucochilum.*
crista tuberculata.
petalis oblongis obtusis, sepalis acutis . . . . 168. *oblongatum.*
„ sepalisque conformibus acuminatis.
labellum basi et apice aequilatum . . . . 169. *delumbe.*
„ „ multo angustius.
crista 5-dentata laevis . . . . 170. *nebulosum.*
„ 7-loba rugosa . . . . 171. *caldense.*
Col. alae utrinque acutae (nunc quadratae)
hastatae acuminatissimae . . . . 172. *Reichenbachii.*
bilobae acuminatissimae . . . . 173. *maizaefolium.*
indivisae.
sep. et pet. oblonga obtusa . . . . 174. *sessile.*
„ „ acuminata.
crista antice bicruris.
7-loba . . . . 175. *ensatum.*
3-loba . . . . 176. *dichromaticum.*
crista triloba.
lobis aequalibus . . . . 177. *guttulatum.*
lobo medio rostrato pubescente . . . . 178. *cruciferum.*
„ „ multo breviore oblongo pubescente . . . . 179. *cerebrigerum.*

I. Rostrata.

126. **ONCIDIUM BOOTHIANUM** Rchb. fil. in Bonplandia, Ap. 1. 1854. Xenia Orch. ined. Lindl. Fol. 39:

Panicle long, slender, drooping, narrow. Flowers small. Sepals and petals very blunt. Lip narrow with a long isthmus, and very round flat auricles.

Wild in Venezuela; province of Carabobo, Cumbre de Valencia, at 5000 ft. — Fünck and Schlim, 629; Wagener.

Rchb. fil. Bonpl. II. 14:

Foliis ligulatis pergameneis apice bilobulo attenuatis, panicula densiflora, sepalis cuneato oblongis acutiusculis, tepalis subaequalibus sessilibus, omnibus nunc apice rotundatis, imo retusiusculis, labello elongato angusta basi utrinque rotundato auriculato, apice dilatato transverso obtusangulo, medio emarginato, latitudinem baseos superante, callo baseos puberulo oblongoquadrato depresso, antice depresso bi-

dentato, lateribus serrato, gynostemio basi gracili, alis dolabriformi quadratis, conspicuis, margine externo nunc denticulatis angulo inferiore acuto extenso, tabula infrastigmatica pandurata.

Die Blüthen sind hochgelb. Die untern Dreiviertel der Hüllblätter bis auf einen dünnen Saum schön roth; quer über die Mitte der Lippe ein rothes Band, am Grund einige dergleichen Fleckchen; die Grösse ist die derer des Oncid. lunatum. Die schmale Lippe erinnert an O. Wentworthianum und O. raniferum. Carabobo. Wagener.

127. ONCIDIUM WEDDELLI Lindl. Fol. 39:

O. panicula ramosissima heterantha ramulis flexuosis intricatis, sepalis petalisque lineari-obovatis secundis, labello basi acute rhombeo antice elongato in lobum med. reniformem emarginatum expanso, crista tomentosa quinque-loba dentibus 8 liberis acutis circumstantibus, columna tereti tomentosa alis bipartitis linearibus buccis horizontalibus oblatis.

A most curious plant with the habit of O. pyramidale. Flowers equally small. Colum terete, with a pair of horizontal oval cheeks, and column-wings each divided to the base into two linear lobes, of which the two upper arch over the anther.

Wild in Bolivia; in the valleys of Tipani and Apolobamba, in the province of Larecaja and Caupolican, among grass—Weddell.

128. ONCIDIUM SCHLIMII Linden. Lindl. in Paxton's Fl. Garden, no. 444. L. F. 39:

Owing to some confusion in my references to Linden's numbers, no one has been able to identify this well-marked plant. The panicle is widely spreading, loose, and compound. Flowers bright yellow, spotted with brown. Its twolobed column-wings, with the lobes divaricating and tapering to fine points, and the rostrate stigma mark it well. In O. tigratum the two-lobed column-wings are truncate or even emarginate.

Wild in New-Granada; in the province of Ocanna, at the height of 3—4000 ft. — Schlim. 1012.

Lindl. Paxt. Fl. Germ. II. 118:

Foliis binis rectis ensiformibus, scapo subscandente racemoso paniculato racemis flexuosis, labello bilobo rotundato basi angustiore auriculato cristae tuberculis quaternis, columnae alis triangularibus, utrinque acuminatissimis.

Scape 5' long. (Funck and Schlim 7. Oct. 46.) Merida 7000'. Pseudobulbs narrow. Panicle wavy, weak, inclined to scramble and bears short racemes or imperfect panicles. Flowers smaller than in O. reflexum near which the species will stand. Bright yellow slightly and irregularly barred with brown.

129. ONCIDIUM TIGRATUM Rchb. fil. in Bonpl., May I. 1845. Lindl. Fol. 40:

Flowers deep-yellow, with dark crimson blotches. Column-wings so deeply two-lobed, as to be bluntly lunate. Differs from Weddelli in the lobes of the column-wings being broader, the column smooth, not downy. I have only seen a single flower and a sketch.

Wild in Peru-Warczewicz.

Rchb. fil. Wrsewz. Bonpl. II. 109:

Nulli affine, labelli portione postica rhombea in anticam reniformem sinuatam per unguem brevem transeunte, callo varicoso in basi, praepositis carinulis ternis, alis assurgentibns sinuato excisis, hinc erecto bifidis.

Paniculae rami ramulosi fractiflexi, bracteae linearitriangulae ovariis pedicellatis multoties breviores, flores illis Oncidii carthaginensis aequimagni ejusdemque substantiae in sicco subchartacei; sepalum dorsale oblongocuneatum apiculatum, lateralia unguiculata cuneata oblonga subapiculata paulo longiora, tepala a cuneata basi flabellata, apice retusiusculo rotundata nunc cum apiculo, sepalis duplo latiora, la-

belli portio posterior transverse rhombea utrinque acuta, medio antice producta in unguem angustum portionis anticae paulo latioris cordato reniformis apice exciso sinuatae, sinus interjecti angusti obliqui; callus varicosus in basi, praepositae 3 carinulae subtriangulae, addita utrinque falcula subaequali, regio antecarinalis velutina; gynostemium recurvatum, basi tenui, supra clavatum, rostellum breve ornithorrhynchum deflexum, alae assurgentes excisura sinuata ad medium bifidae, laciniae ligulatae breves, superior hinc crenulata; tabula infrastigmatica utroque medio margine sinuata. Blüthen scheinen hochgelb; Hüllblätter und Lippengrund dunkelcarmoisin gefleckt und bandirt. Diese Art steht durch die Gestalt der Säulenflügel allen bisher beschriebenen Arten dieser Gruppe fern. Auf den ersten Blick glaubten wir, Oncidium retusum vor uns zu sehen, welches in den meisten wichtigen Punkten völlig verschieden ist. v. Warscewicz.

Huc: *Oncidium leopardinum* Lindl. Fol. p. 28. sub Nr. 98:

Panicula laxa diffusa flexuosa, petalis ovatis obtusis apiculatis subunguiculatis, labelli auriculati lobo medio unguiculato transverso emarginato, crista antice 5 carinata carinis lateralibus anticis longioribus falcatis postice sinuosa dentibus confluentibus duplici serie circumdata, cum alis maximis cordatis sublobatis retrorsum falcatis.

Apparently a plant with a loose straggling panicle. Flowers the size of those of O. pyramidale, or smaller, with very dark distinct bands on the sepals and petals, and at the base of the lip. The crest consists at the base of a lobed sinuous centre surrounded by a double line of half confluent teeth, in front of five teeth, of which the two basal are short, the central twice as long as they, and the two in front still longer and curving outwards.

Wild in Peru; sources of the Marannon-Warscewicz.

II. („Sarcoptera" Lindl. l. c.) *Miltoniastrum* Rchb. fil.

130. ONCIDIUM CARTHAGINENSE Swz. act. Holm. 1800, p. 240. LO. 201. Lindl. F. 40:

(A) *Swartsii*. Flowers whitish, variegated with ferruginous and purple. Petals paler.

E. undulatum Bot. Mag. t. 777.

O. carthaginense Swz. fl. ind. occ. 1479.

E. carthaginense Jacq. Amer. 228, t. 133, fig. 4.

(B) *Oerstedii*. Flowers pure white, variegated with various shades of rose.

O. Oerstedii Rchb. in Bonpl., Ap. I. 1854.

(C) *sanguineum*. Flowers smaller than usual, pale yellow, with bright irregular crimson spots.

O. sanguineum Lindl. Sert. Orch. t. 27.

O. Huntianum Bot. Mag. t. 3806.

O. roseum Lodd. Cat., ed. 2, nb. 1316.

O. luridum Henchmanni Km. et West. Fl. Cab. t. 97.

O. Henchmanni Lodd. Cat., ed. 2, no. 1323.

O. panduriferum HBK., I. 348, t. 82. LO. 203.

(D) *Klotzschii*. Flowers larger than the last, dirty white, marked with round spots of deep rose.

O. Carthaginense Lk. Klotsch et Otto. Ic. t. 6.

I return to my original view of the distinctness of this and O. luridum, which never has the dorsal sepal arched over the column with a longer unguis than others, nor the base of its lip nearly as broad as the middle lobe, to say nothing of minor distinctions. Prof. Rchb. was led by an inaccurate drawing into proposing O. Oerstedii, as I was by the same cause in the case of O. sanguineum, whose crest is most incorrectly given in the „Sertum"; it in reality consists of the usual five tubercles, of which one central and two in front are plump and even, white, the two in the rear are shrivelled and sinuous. Similar negligence has been shown by the artist who prepared the plate for Link, Klotzsh, and Otto's „Icones", the crest of

which bears no resemblance to truth. With regard to this O. sanguineum, there is no doubt that the O. Huntianum of the „B. M.“ and it are identical. Sir Wm. Hooker was misled by the assurance from Woburn, that the plant sent him from that place was Brazilian, not the only misrepresentation which has found its way into public out of that establishment.

O. obsoletum, an unpublished? name of Galeotti's, evidently belongs to some variety of this, as I learn from Prof. Rchb. To the same acute observer is due the discovery, that O. panduriferum is nothing more than some common form of O. carthaginense; probably of var. sanguineum, judging from a flower with which he has favoured me.

Wild in Tropical America; A. Jamaica, on trunks and large branches of trees— Swartz; thick forests of Carthagena—Jacquin; B. Nicaragua—Oersted; C. La Guayra—Loddiges; Santa Martha—Purdie, in hb. Hooker; D. Caraccas—Wagener.

ad C. *Oncidium sanguineum* Lindl. Bot. Reg. XXV. (1839.) Misc. 18:

Ebulbe, foliis oblongis coriaceis dorso carinatis, scapo longissimo paniculato, sepalis subrotundis unguiculatis lateralibus basi connatis petalisque crispis sublobatis, labelli trilòbi subcrispi vernicati lobis subaequalibus intermedio retuso cuneato, crista ovata convexa corrugata, columnae alis rotundatis sublobatis, anthera puberula.

Habit of Oncidium carthaginense, but with straw-coloured flowers stained with crimson blotches. La Guayra. Loddiges imp.

Lindl. Paxt. I. p. 21: the two posterior tubercles are more oblong, projecting with a furrow in the middle. In all varieties of Oncid. carthaginense there is a pair of strong warts in place of the small teeth one on each side of the anterior elevation, and the like body is divided into two distinct V. — Hook. Lond. Journ. III. 508. (1844.) Kingston, on Logwood hedges. Purdie. — Rchb. fil. Bonpl. II. 13: Caracas 2000'. Wagener.

Huc: *Oncidium Huntianum* Hook. Bot. Mag. 3806:

Pseudobulbo conico, folio solitario, oblongo, coriaceo, crasso acutiusculo, basi attenuato, sessili: scapo longissimo, racemo composito, elongato; pedicellis bi- — trifloris; petalis sepalisque patentibus, oblongo-ovatis; crispatis; labello trilobo basi supra sub 5-tuberculato, lobis lateralibus crassis acutiusculis, intermedio subflabelliformi longiore medio emarginato, columna bialata.

Brazil. Woburn 39 (10.).— Perigonium flaveolum, rubro adspersum, labii basi flava.

131. ONCIDIUM GUTTATUM Rchb. fil. (LURIDUM Lindl. in Bot. R. t. 727). Lindl. Fol. 41:

(A) *olivaceum*. Flowers olive-green, with dusky brown blotches. Botan. Magazin. 1839, t. 16.

(B) *guttatum*. Flowers dull yellow, spotted with cinnamon-brown. Bot. Register 1839, t. 16.

Ep. guttatum Linn. sp. pl. 1351.
Cymbidium guttatum Willd. 4. 102.
O. Boydii Hort.
O. cuneatum Lindl. Coll. Bot. sub t 27.

(C) *atratum*. Flowers dull olive, with a very dark brown whole-coloured lip, Hort. Soc. Journ., VI., c. ic. xyl.

O. Lindeni Lodd. Cat.

(D) *intermedium*. Flowers dull yellow, marked with circular brown spots. Panicle stiff, narrow, with rigid flexuose branches.

O. intermedium Knowles and Westcott Fl. Cab. t. 60. bad.

(E) *Morreni*. Flowers pale rose-colour, spotted with crimson and tipped with yellow. Lip cinnamon-brown.

O. corymbephorum Morren. Ann. Gand. t. 275.

Many more varieties might be enumerated, were it desirable — for this is evidently a most variable plant, constant however in the form and proportion of its parts, the column and column-wings, and also in the crest, with the exception that in D, which may be a distinct species, an additional tubercle or two appears on the outside of the others.

Wild in Tropical America; A. Martinique—Sieber; Trinidad—Hooker; Mexico—Schiede (Rchb.); B. Jamaica—Hort.; C. Mexico, near Tampico-Hartweg; D. Santiago in Cuba, on the Sierra Maestre, at the height of 5000 ft.—Linden.

Ad C: *Oncidium Lindeni* Lodd. Cat. ed. 2. 1826. Sert. sub 48:

Habit of a small O. carthaginense. Labellum intense black chocolate; the flowers appear in a simple zigzag spike, which continues to grow after the flowers have fallen off. I did not see it in flower. —

Lindl. Paxt. I. 185. N. 238. Journ. Hortic. Soc. VI: *Oncidium luridum atratum* Lindl. Mexico. Rich crimson flowers. Whether or not O. luridum is really a mere variety of the Carthag. Oncid., becomes more and more doubtful as our knowledge of such plants extends. In the present instance it is unnecessary to open that question, the plant now mentioned being undoubtedly a very fine form of the O. lurid., whatever the relation of the latter to the Carthagenen. O. may finally prove to be. With the habit of the common form of the species this combines flowers smaller than usual, very flat, with olive and rose coloured sepals and petals, and a rich crimson lip furnished at the base with 5 purple black tubercles, 4 of which sourround the fifth of these tubercles; the central and two anterior are oblong and simple, the two posterior are concave, or almost kidney-shaped, with the concavity backwards. The wings of column are oblong, truncated fleshy bodies attached by the narrower end. It is a fine var., in some resp. like the purple O. haematochilum.

Ad D: *Oncidium intermedium* Knowl. Westc. Flor. Cab. II. (1838). 60:

Foliis oblongis acutis rigidis carnosis, scapo flexuoso paniculato ramoso multifloro, sepalis undulatis unguiculatis subintegris, supremo rotundato subcochleato, lateralibus spathulatis subreflexis, petalis late unguiculatis subrotundatis crenulato-crispis, labelli lobis lateralibus nanis revolutis intermedio reniformi undulato emarginato, crista postice lobis 2 crassis tuberculatis, antice callis 3 intermedio elevato elongato lateralibus divergentibus, columnae alis carnosis obliquis supra margine repando-sinuato infra auricula elongata.

Oncidium sanguineum Lindl. Var. *auriculatum* Rgl. Ind. Sem. Pets. 55. (*Oncid. ornatum roseum* et *obsoletum roseum* H. Petropol.): Sepalis petalisque luteis roseo-maculatis, labello luteo-albo, columna alba lobis auriculaeformibus. Cetera ut genuini.

Lindl. Paxt. Fl. Germ. I. p. 21: „there is quite a bunch of tubercles at the base of the lip."

132. ONCIDIUM HAEMATOCHILUM Lindl. in Paxt. Fl. Gard, t. 6. Lindl. Fol. 41:

Intermediate as it were between O. Lanceanum and luridum. Sepals and petals green mottled with crimson. Lip crimson mottled with white. Pollenmasses and appendages those of O. luridum.

Wild in New-Granada—Loddiges.

Lindl. l. c. p. 21:

Ebulbe foliis oblongis planis, coriaceis, acutis, maculatis, solitariis, racemis, densis rigidis, sepalis liberis petalisque conformibus spathulatis undulatis, labello subrotundo basi auriculato, crista basi obsoleta antice flexuosa (litteram W. referente) inde in jugum producta denticulo utrinque; columnae alis rotundatis decurvis sublobatis.

In all varieties of Oncidium carthaginense is a pair of strong warts in place of the small teeth, one on each side of the anterior elevation and the W like body is divided into two distinct V's.

133. ONCIDIUM LANCEANUM Lindl. in Hort. Trans. n. s. II. 100, t. 7. Bot. Reg. t. 1887. Lindl. Fol. 41:

This beautiful plant seems confined to Surinam. Its sepals and petals are greenish richly mottled with brown; its lip rose-colour, deep violet on the lower half. The flowers are fragrant, like Vanilla, and vary in the depth of colour; but this seems to depend on cultivation only.

Wild in Surinam—Lance, Regel 1786, Hostmann 342.

Lindl. in Hort. Trans. l. c.:

Ebulbe, foliis oblongis acutis planis substriatis carnosis, scapo racemoso composito erecto rigido racemulis confertifloris, sepalis petalisque conformibus oblongis obtusis carnosis concavis margine undulatis, labelli lobo medio dilatato subcuneato integerrimo basi hastato, lobis lateralibus semiovatis, crista triloba carnosa jugoque elevato proclivi, columnae alis carnosis rotundatis, anthera cristata.

Floral. Cab. II. Nr. 79! In Tamarindo, Sapodilla, Calabash trees. —

134. ONCIDIUM CAVENDISHIANUM Bateman Orch. Mex. t. 3. Lindl. Fol. 42:

O. pachyphyllum Hook. Bot. Mag. t. 3807.

Flowers large yellow, in a stiff panicle, with a tinge of green on the sepals and petals. Base of lip much wider than the middle lobe. O. pachyphyllum has some crimson spots on the sepals and petals.

Wild in Guatemala—Skinner.

Bat. l. c. (1837):

Foliis erectis carnosis late lanceolatis acutis scapo elato triplo brevioribus, sepalis obovatis obtusis, supremo fornicato, petalis subaequalibus oblongis obtusis, valde undulatis; labello magno trilobo, laciniis lateralibus rotundis petalis subconformibus intermedia majore reniformi profunde emarginata, cristae tuberculis 2 ad basin, 2 a fundo lamellae elevatae rotundatae sitis; columna brevi crassa auricula decurva versus apicem utrinque aucta.

Sepals greenish yellow spotted with bright chestnut. Lip of a pure yellow.

Guatemala. Skinner.

Lindl. Sert. sub 48:

Ebulbe, foliis carnosis strictis acutis basi complicatis, scapo paniculato brevioribus, sepalis obovatis obtusis supremo fornicato, petalis subaequalibus oblongis obtusis valde undulatis, labelli trilobi laciniis lateralibus unguiculatis rotundatis intermedia majore reniformi profunde emarginata, cristae tuberculis 2 ad basin, 2 a fronte lamellae elevatae rotundatae sitis, columnae alis linearibus decurvis inflexis.

Guatemala. — A most noble species, panicles of large flowers, having greenish sepals and petals and a bright clear yellow lip.

Van Houtte Fl. Serres IV. 390: dicit analysin in Bot. Mag. 2807. minus esse correctam, quam figuras plantae delineatae ipsius.

Huc judice Lindl.: *Oncidium pachyphyllum* Hook l. c.:

Pseudobulbo nullo, folio elliptico oblongo apice recurvo acuto crassissimo, panicula ampla, sepalis late obovato spathulatis undulatis liberis, petalis similibus sed paulo angustioribus, labello tripartito, disco basi tuberculis 4 cruciatim dispositis, quinto in medio, laciniis lateralibus obovatis intermedia transversim oblonga emarginata, columna utrinque ala oblonga deflexa.

Mexico, Woburn Collection. Parkinson.

Perigonium flavum, rubro adspersum.

Bot. Reg. XXVI. 1840. Misc. 190. Oncid. pachyphyllum is the same as the Oncid. Cavendishianum, Bat. Orch. of Mex. and Guat. t. 8.

Obs. Haec sensu Lindleyano. Quaestio perdifficilis. In Xeniis Orchidaceis I. explicavi (et suadente amic. Wendland fil.) et distinxi utrumque. Rchb. fil.

135. ONCIDIUM BICALLOSUM Lindl. in Benth. Pl. Hartw. p. 94. B. R. 1843. t. 12. B. M. t. 4148. Lindl. Fol. 42:

Much like the last; but the basal lobes of the lip are very much smaller, the flowers are always larger, and they usually (always?) grow in a raceme instead of a panicle. Sir W. Hooker suggests that it may be a variety: but the differences indicated seem constant.

Wild in Guatemala—Hartweg.

Lindl. Pl. Hartw. Fasc. 2. p. 94. 1842:

Bracteis ovatis membranaceis obtusis, sepalis liberis obovatis concavis, petalis oblongis obtusis, labelli lobis lateralibus abbreviatis, intermedio maximo transverso emarginato subcordato, crista bicallosa, tuberculis distantibus uno ante alterum posito rugosis subtrilobis, columnae auriculis linearibus falcatim recurvis.

Ramulum inflorescentiae tantum vidi. Secundum cl. Hartwegium faciem induit O. Cavendishiani, omnino tamen diversum. Crista labelli bituberculata, nec non lobis lateralibus parvis facile distincta. Lindl. Hacienda de Diegera. Mexico. Hartweg.

Lindl. Bot. Reg. XXVIII. (1842). Misc. 14:

Has much the habit of O. Cavendishianum so that it seems a mere variety of it. Flowers 2" diam. appear in a dwarf erect raceme, not panicle; they are of a rich yellow, with the sepals and petals bordered with cinnamon colour; the labellum has two very small lateral lobes, and for its crest it has two distinct tubercles, the posterior double, the anterior trilobed, and the two separated by a considerable space. The flowers are slightly scented, which is not the case with O. Cavendishianum.

Bot. Reg. XXIX. (1843). tab. 12. — Hook. Bot. Mag. (1845.) 4148: Dr. Lindley alludes to its close affinity with Oncidium Cavendishianum, so much to seem a mere variety of it, but it is in reality quite distinct. My own investigations would rather lead me to consider the two as forms of one and the same kind, and that the species is liable to considerable variation the more especially as our Oncid. pachyphyllum Bot. Mag. 3807 is considered by Dr. Lindley a state of O. Cavendishii. To me our present plant seems to correspond better with Mr. Batemans original figure of O. Cavendishii, than our O. pachyphyllum does.

III. Hymenoptera. A. Heterantha. L. F. p. 42.

136. ONCIDIUM PENTADACTYLON Lindl. in Ann. Nat. Hist., XV. 383. Lindl. Fol. 42:

Flowers small, in a long narrow many-flowered panicle, fragrant (Purdie), apparently gaily blotched with brown on yellow.

Wild in Peru; Quito—herb. Hooker; village of Tambillo—Hartweg, Jameson, in hb. Hooker; Caraccas, Paramo of Ruiz—Purdie.

Lindl. l. c. 1845:

Pseudobulbis ovatis compressis diphyllis, foliis lanceolatis tenuibus, scapo longissimo paniculato multo brevioribus, floribus plurimis abortientibus, sepalis lineari-lanceolatis liberis, petalis lanceolatis, labello oblongo emarginato, pandurato lobis basilaribus intermedio subaequalibus, crista verrucosa processubus 5 digitiformibus circumdata, columnae alis maximis obtuse lobatis.

Quito. (Hartweg.)

This is near O. Wentworthianum in the colour and structure of the flowers. Occasionally the principal part of the abortive as in O. heteranthum. The panicle is occasionally 3 feet long or even more.

137. ONCIDIUM CULTRATUM Lindl. in Ann. Nat. Hist., XV. 384. Lindl. Fol. 42:

A small species, about six inches high, with a stiff curving slightly panicled raceme.

Wild in Popayan; in woods on the ascent to Setara—Hartweg.

Lindl. l. c. 1845:

Pseudobulbis ovalibus compressis, foliis lanceolatis solitariis basi canaliculatis, scapo humili aequalibus, panicula cernua simplici floribus quibusdam abortientibus, sepalis petalisque oblongis subaequalibus reflexis, labello bilobo, crista parva tuberculata, columnae alis maximis cultratis obtusis integris.

Popayan. (Hartweg).

As far as I can judge of O. olivaceum which I have never been able to see, it must be near this, which is a dwarf species with not more than 10 flowers in the panicle. The flowers appear to be olive brown with a yellow lip.

138. ONCIDIUM RETUSUM Lindl. in Bot. Reg. sub t. 1920. Paxt. Fl. G., II. ic. 136. Lindl. Fol. 42:

Perhaps the rarest of its race. Flowers marked with intensely brown bands nearly up to the edge.

Wild in Peru; M. Pariahuanca—Mathews, 1066.

Lindl. l. c. 1837:

Pseudobulbis —, foliis lineari-lanceolatis, scapo paniculato divaricato, sepalis petalisque subaequalibus spathulatis retusis subcarnosis, labelli lobo medio reniformi bilobo lateralibus paulo majore, cristae lamellis 5 brevibus tuberculos 6 elongatos circumdantibus, columnae alis maximis acinaciformibus dentatis.

A beautiful species with deep chesnut and yellow flowers, and a yellow lip. Its mode of growth is that of O. Baueri.

B. Homoeantha: * *obsoleta*. L. F.p. 42.

139. ONCIDIUM BRACTEATUM Rchb. fil. in Bot. Zeit. 1852, p. 695. Lindl. Fol. 42:

A few flowers from Prof. Rchb. do not enable me to examine this satisfactorily. Its scabrous peduncles and great spathaceous bracts are remarkable. „The end of the inflorescence is terminated by convolute bracts," — Rchb. in litt.

Wild in Veragua; Chiriqui, on trees, at 6—9000 ft. — Wagener.

Rchb. fil. l. c.: *O. bracteatum* Wswz. Rchb. fil.:

Pedunculo muriculis obtusatis stomatophoris asperulo, ramulis in axillis spatharum glumacearum acutarum, bracteis subaequalibus ovaria pedicellata subaequantibus, perigonii phyllis oblongis acutis prope aequalibus, lateralibus internis quidem latioribus, labello trilobo, lobis lateralibus auriculaeformibus, obtusatis, lobo medio ab illorum basi sensim angustato, subito in laminam reniformem bilobam dilatato, callo baseos angusto dorso carinato, antice tricrenato, lateribus paucidentato, alis gynostemii angustis, minute denticulatis, lamellis corneis quadratis parvulis suppositis inferne rectangule flexis confluentibus.

Die obersten 2—3 Scheiden tragen keine Zweiglein und bilden einen geschlossenen Schopf, etwa wie die untersten sterilen Bracteen gewisser Coelogynen. Blüthe sehr gross, wie die des Oncid. Wentworthianum. Der Anhangsapparat unter der Narbe

ein kleiner, oben offener Kasten ohne Deckel ist eine wunderliche Neuigkeit. Chiriqui Cordilleren 6—8000' auf Bäumen. October. v. Warscewicz.

140. ONCIDIUM FASCIFERUM Rchb. fil. in Bonpl., May I. 1854. Lindl. Fol. 42:

A tall branching wide panicle, with acuminate spathaceous bracts half as long as the peduncle, and an extremely short column, with small circular wings and cartilaginous cheeks of the same form, and not much larger, are characteristic of this well-marked plant. The crest consists of a broad blunt carina, on each side of which stands a pair of notched teeth, one a little in front of the other. I have a fine specimen from Warczewicz.

Wild in Peru; at the sources of the Marannon—Warczewicz.

Rchb. fil. Wrswcz. Bonpl. II. 109:

Aff. pentadactylo floribus monomorphis, labello basi duplo angustiori, quam apice, calli systemate quinqueseriato; mediano interjecto lineari.

Panicula elongata brachyclada, ramuli distantes, infimi 4—8flori, bracteae triangulae ovaria pedicellata quinta fere parte aequantes, sepala linearilanceolata acuta basi bene cuneata, tepala a basi anguste brevissimeque cuneata statim dilatata oblonga acuta sepalis duplo latiora, labellum panduratum, basi utrinque acutangulum, angustum, antrorsum sensim angustatum, ab hoc ungue subito dilatatum in laminam reniformem apice medio triangulo insiliente excisam, callus quinqueseriatus: carina media abbreviata; adjectae ter binae carinulae: anticae lineares, reliquae 4 obtusangulae; extremae utrinque 2 lineariligulatae breves; gynostemii postice dorso summo apiculati fovea cordiformis; alae angustae, longae, dolabriformes, angulo superiori acutae, inferiore obtusae; tabula infrastigmatica apice utrinque valde angulata. Nächst *O. pentadactylon* Lindl.! Es fehlen aber die abortirten Blüthen, die Zweige der Rispe sind bei dieser Art gross und verzweigt; die Säulenflügel breiter, die Lippe am Grunde eben so breit, als vorn (hier schmäler); endlich die Buckel verschieden. Die Blüthen beider Arten sind gleich gross. Hüllblätter und Lippengrund bei dieser sehr schön rothbraun gefleckt. Peru. v. Warscewicz.

141. ONCIDIUM PLANILABRE Lindl. in Journ. Hort. Soc., VI. 59. c. ic. xyl. L. F. 43:

Flowers dull olive-brown, except the lip, which is clear yellow, and cinnamon coloured at the base. The singular rhomboidal denticulate crest with the anterior angle produced and resting upon a pair of unequal teeth on either side is very peculiar.

Wild in Brazil; locality unknown.

Lindl. Journ. H. S. VI. 59. Paxt. Fl. G. I. 170. Nr. 229:

Pseudobulbis ancipitibus tenuibus costatis, foliis ensatis racemo brevioribus, racemo simplici, sepalis petalisque lanceolatis unguiculatis undulatis subaequalibus, labelli laciniis lateralibus oblongis parvis, intermedia semicirculari plana emarginata, crista rhomboidea cuspidata margine crassa verrucis 2 inaequalibus utrinque versus cuspidem, dente forti obtuso faciei columnae adnato, columnae brevibus carnosis inflexis.

Much like O. Suttoni. Sepals and petals rhomboid lanceolate, acuminate, wavy. Crest consists of a broad lozengeshaped rugged edged cuspidate process, beneath which, near the point, on either side, are 2 small unequal tubercles; in addition to which there is a stout blunt tooth which rises in front of the column, forming part of it. The wings of the column are roundish, dwarf, incurved.

142. ONCIDIUM TIPULOIDES Rchb. fil. in Bot. Zeit. 1852, p. 856. Lindl. Fol. 43:

Sepals lanceolate, wavy, narrower than the oblong acute unguiculate petals. Lip hastate, very narrow at the base, tapering into a long narrow unguis expanding into a bluntly crescent-shaped emarginate middle lobe. Crest small, consisting of a horseshoe ridge, whose convexity is extended into a keel, with a small wart at the base

on either side. Flowers yellow, very narrow, with a few reddish-brown flecks. From a sketch communicated by Rchb. and his description.
Wild in Peru; Cuchero—Pöppig.

Rchb. fil. l. c.:

(Foliis oblongis basi petiolatim attenuatis, acutis), panicula laxa, diffusa multiflora, ramis haud elongatis, bracteis triangulis apice subulatis abbreviatis, perigonii phyllis unguiculatis dein oblongis acutiusculis repandulis, labello brevissimo unguiculato cuneato, basi utrinque anguste angulato, humerato, dein lineari, apice in laminam reniformem postice utrinque valde angustatam antice medio emarginatam dilatato, carina interposita in basi postice in lineam transversam lunulatam expansa, addito lobulo obtuso, utrinque in margine, gynostemio incurvo aptero, tabula infrastigmatica prominula, utroque margine quadrata, retusa, medio canaliculata, androclinio postice apiculato, rostello ornithorrhyncho, deflexo, brevi. —

Ob die Blätter mit dazu gehören, kann ich nicht verbürgen, da sie lose liegen. Blüthen gelb mit wenig rothbraunen Flecken; sehr schmal und auffallend lang. Cuchero in Peru. Pöppig.

143. ONCIDIUM CITRINUM Lindl. in Bot. Reg. t. 1758. Lindl. Fol. 43:

Flowers bright yellow, with a few dull clouds on the sepals and petals. This must be near tipuloides, which I have not seen. The cheeks of the column are more conspicuous, than in any of the succeeding of this section.
Wild in Trinidad—Loddiges.

Lindl. l. c. (1836):

Pseudobulbis oblongis compressis, foliis ensiformibus rigidis scapo simplici brevioribus, sepalis petalisque labelli longitudine lineari oblongis undulatis, labello cordato utrinque introrsum arcuato apice dilatato subreniformi, crista 8 tuberculata pubescente, alis minimis, stigmate orbiculari.

Planta O. altissimo (fol. 1651), igitur Baueri valde affinis et forte mera varietas. Diversa tamen videtur scapo non ramoso, floribus parum maculatis, sepalis petalisque minus acuminatis, crista tuberculata potius quam digitata, demum alis minimis et stigmate orbiculari nec angusto compressoque. Trinidad.

144. ONCIDIUM PICTURATUM Rchb. fil. in Bonpl., Ap. I. 1854. L. F. 43:

Extremely like O. citrinum, except that the flowers have olive-green sepals and petals, spotted like those of O. leucochilum. This and the last require to be compared in a living state.

Wild in the Caraccas—Warczewicz.

Rchb. fil. in Bonpl. II. 13:

Panicula racemosa, bracteis scariosis spathaceis, ovarii pedicellati tertiam seu quartam adaequantibus, perigonii phyllis oblongis acutis undulatis, labello pandurato, basi angusto, lobis basilaribus obtusangulis postice humeratis, sensim antrorsum angustato, lobo medio lato reniformi, apice bilobo, sinu interjecto parvo, callo baseos utrinque tridentato, gynostemio incurvo, alis retusis, anguste quadratis, denticulatis, basi acutangulis, tabulae infrastigmaticae limbo obtusangulo.

Eine höchst ausgezeichnete Art. Blüthen so gross wie die eines grossen O. leucochilum. Die Hüllblätter sind olivengrün, mit schönem Schwarzroth überwiegend reich und gross gefleckt, die untere Hälfte der vorn hochgelben Lippe ist braunroth. *Oncid. sphacelatum* Lindl. und Consorten sind die nächsten Verwandten. Die fast ellenlange Aehre, welche unten durch kurze, höchstens dreiblüthige Zweiglein ris-

pig wird, die Farbe, die Lippenschwiele und die Ecken unter der Narbe zeichnen sie hinlänglich aus. Caracas. Wagener

145. ONCIDIUM PARDALIS Rchb. fil in Bonpl., Ap. I, 1854. Xenia ined. L, F. 43:

Apparently a small species with the habit of O. cardiostigma. Scape fewflowered racemose. Sepals and petals exactly alike, lanceolate. Lip nearly as broad at the point as the base, denticulate at the incurved sides. Column slender and without projecting cheeks; wings merely two inconspicuous membranous teeth. Flowers yellow with blue! (blauen) flecks. I have a figure from Prof. Rchb.

Wild in La Guayra—Wagener.

Rchb. fil. l. c. II. 13:

Pedunculo gracili spithamaeo, basi multivaginato, apice flexuoso, racemoso, bracteis ovariis elongatis multo brevioribus, sepalis tepalisque unguiculatis lanceolatis acutis undulatis, labello panduraeformi, basi angustiore, medio paulo constricto, callo basilari depresso, postice transverse gyroso, utrinque bidentato, medio carinato, gynostemio incurvo, stigmate abbreviato utrinque pone basin minute unilobulato (alarum loco), tabula infrastigmatica elongata, utroque margine emarginata.

La Guayra. Blüthen so gross, wie bei vorigem, gelb mit blauen Fleckchen auf Perigon und Lippengrund; die Spitzen der Perigonialblätter sind ungefleckt.

Caracas Wagener.

146. ONCIDIUM CARDIOSTIGMA Rchb. fil. in Bonpl., Ap. I. 1854. Lindl. Fol. 43:

Seen in cultivation with Booth and Sons, of Hamburgh. Pseudobulb slender, narrow, two-edged, furrowed. Leaf about four inches long, narrow, complicate, oblique at the point. Scape shorter than the leaf, three or four flowered. Flowers small, with brown sepals and petals, the last of which are the widest: lip yellow, brown at the base. Column with two small auricles on each side, instead of column-wings.

Wild?; said to come from Mexico.

Rchb. fil. in Bonpl. II. p. 91:

Ab omnibus recedit lobulis quadrigeminis alarum loco et callo depressis quadrato apice et basi bilobulato, lobulo quinto antice superposito.

Pseudobulbus gracilis oblongus angustius anceps, utrinque bicostatus. Folia ligulata, apice valde inaequali biloba. — Bracteae scariosae acutae ovarii pedicellati quintam aequantes. Sepala oblonga obtusiuscula, tepala prope duplo latiora. Labellum a basi brevissime unguiculata postice utrinque angulatum, latiusculum, dein subangustatum, medio in laminam reniformem, alte bilobam expansum, lobo altero in alterum imbricato. Callus baseos quadratus, postice utroque latere unituberculatus, apice in tres lobulos rotundatos expansus, medio superposito. Gynostemium gracile, fovea stigmatica rhombea basi retusa, auriculae 2 acutae minutae utrinque pone apicem et basin foveae sibi superpositae, tabula infrastigmatica nullo pacto producta.

147. ONCIDIUM TETROTIS Rchb. fil. in Bonpl., May I. 1853. Lindl. Fol. 44:

Panicle long, with short branches. Flowers as large as in O. Baueri. Sepals and petals brown. Lip yellow. Crest horse-shoe-shaped at the base, with the convexity next the column; in the curve lies a papillose convexity, and in front of all are about four small warts. Two very minute rudiments placed one above the other on either side of the stigma represent the column-wings. From a sketch by Rchb. and his description.

Wild in New-Granada—Warczewicz.

Rchb. fil. Warsczewicz l. c. II. 109:

Aff. O. citrino labello antice valde dilatato, angulis posticis prope

divaricatis, non retrorsis, callo postico semilunato, antico quadrato, praepositis papulis 2—3, alarum loco utrinque lacinulae 2 superpositae minutae.

Panicula elongata, ramuli abbreviati, flexuosi, pauciflori, bracteae spathaceae acutae, ovariis pedicellatis filiformibus quater breviores, sepala ac tepala a basi cuneata lanceolata acuta undulata, labellum basi utrinque ligulate obtuseque auriculatum, auriculis retrorsis, dein subito attenuatum in cuneum elongatum pro portione antica quam basis duplo latiore reniformi apice bilobo cum denticulo interjecto in sinu, callus posticus transversus semilunatus, anterior quadratus, pustulatus, antepositae papulae 2—3, regiones proximae subvelutinae, gynostemium gracile, apice incurvum, utrinque pone foveam bis alatum: alae = lacinulae parvae obtuse triangulae sibi invicem impositae, raro confluentes, foveae limbus superior (rostellum) tridentatus, denticulus utrinque lateralis, medius linearis, retusus, deflexus; tabula infrastigmatica producta. Blüthen so gross, wie die des O. Baueri Lindl. Hüllblätter braun, Lippe gelb. Neu-Granada v. Warsczewicz. — Die Gestalt der Lippe bedingt eine nahe Verwandtschaft mit Oncidium citrinum: es stehen aber die hintern Oehrchen der Lippe nicht so stark nach hinten und der Mittellappen ist bei dieser Art schmäler; der Buckel derselben ist fast nach dem Plane dessen des Odontoglossum pulchellum geordnet; die Hüllblätter sind breiter und die Säulenohren einfach und fast dreieckig.

148. ONCIDIUM LENTIGINOSUM Rchb. fil. in Bonpl., Ap. I. 1854. Xenia ined. Lindl. Fol. 44:

Pseudobulbs small, furrowed. Panicle is described as ample., with fewflowered divaricating branches. The specimen before me is a slender lateral, with the flowers one inch and a half, and the branchlets two inches apart. The flowers are thin, delicate, as large as in altissimum, clear yellow, with minute brown freckles on the sepals and at the base of the lip. The crest consists of five very small carinulae $\frac{2}{3}$ with a rudimentary tooth or two id addition. In German gardens.

Wild in the Caraccas—Wagener.

Rchb. fil. in Bonpl. II. 13:

Pseudobulbis oblongis sulcatis, foliis —, paniculae amplae ramis divaricatis, paucifloris, bracteis scariosis ovatis acutis pedicellis ovarii vix quartam aequantibus, sepalis oblongis cuneatis acutis, tepalis subaequalibus obtuse acutis, labello pandurato basi utrinque obtusangulo angusto, medio sensim constricto, apice magis dilatato, utrinque obtuse truncato, antice bilobo, callo baseos elongato, basi et apice utrinque curvidentato, dorso carinato, denticulis medio lateri utrinque 1—2additis, gynostemii alis subobsoletis, basi utrinque in auriculam divergentem productis.

Blassgelb, Hüllblätter, insbesondere Tepala, Lippenmittelstück und Schwiele mit zahlreichen blassröthlichen Fleckchen, daher der Vergleich mit Sommersprossen. O. caminiophorum, lentiginosum, Pardalis sind alle drei durch die winzigen Läppchen, welche die Flügel vertreten, ausgezeichnet. Ich kenne kein Oncidium Pluritubercu-latum, welches diese Eigenthümlichkeit hätte; Lippe und Säule bieten die fernern Unterscheidungsmomente, dazu die Zeichnung. Diese Art hat Blüthen von der Grösse derer des O. Harrisonianum Lindl.

Caracas Wagener.

149. ONCIDIUM LINEOLIGERUM Rchb. fil. in Bonpl., May I. 1854. Lindl. Fol. 44:

A sketch of the flower and a few fragments are before me: but they do not enable me to add anything to Prof. Rchb.'s description. It seems to be very near O. altissimum, if indeed it be distinct, which is questionable.

Wild in Peru—Warczewicz.

Rchb. fil. Warczewicz l. c. II. 169:

Aff. O. picturato callo rhombeo marginibus anticis dentato, disco carinato, lineolis sulcatis postice in basi labelli, alis bilobulis.

Panicula elongata, brachyclada, superne racemosa, ramuli fractiflexi oliganthi a squamis spathaceis (6‴ longis, basi 2,5‴ latis) stipati, bracteae lanceocucullatae 1/3—1/4 ovarii pedicellati gracilis occupantes, sepala ac tepala a cuneata basi oblonga acuta, undulata, sepala externa paulo longiora, labellum a basi brevissime unguiculata utrinque auriculatum, auriculae ligulatae, postice rectilineae, antrorsum sensim in cuneum angustatum longum transeuntes, pars antica reniformis, bilobula, basis labelli infima callo depresso lineolis sulcantibus parallelis notata, callus anticus ascendens, apice rostratus, utrinque pluri (3—5) dentatus, gynostemium gracile; fovea rhombea; alae breves, bilobae, obtusangulae, medio sinuatae, tabula infrastigmatica producta. Die Blüthe ist so gross, wie bei O. Baueri Lindl. Nächst O. picturatum Rchb. fil., welches grössere Blüthen, abgerundete Oehrchen, einen breiteren Nagel der Lippe und andere Schwielen hat. Die Linien am Grunde der Lippe und die zweilappigen Säulenflügel bilden die Hauptkennzeichen. Peru: von Warsczewicz.

150. ONCIDIUM ALTISSIMUM Swartz. LO. 200. Bot. Reg. t. 1851. Bot. Mag. t. 2990. Lindl. Fol. 41:

Racemes sometimes thirteen feet long, almost simple except quite at the base. Sepals and petals brown and yellow. Lip bright yellow. The column is rather short; its wings wavy and somewhat lobed.

Wild in the West Indies.

Bot. Reg. XXII. (1836.) 1851:

Pseudobulbis subrotundis compressis ancipitibus, foliis (distichis) ensiformibus carinatis acutis, scapo decurvo multo brevioribus, racemo subsimplici, sepalis petalisque labelli longitudine lineari-lanceolatis undulatis, labello apice dilatato bilobo medio constricto basi auriculato, crista enneadactyla, depressa, columnae alis rotundatis abbreviatis undulatis crenulatis.

Ep. altissimum Jacq. stirp. Am. 229. t. 141.

Perigonii phylla 5 viridia brunneo maculato, labellum flavum.

Hook. Bot. Journ. I. 7: Panaramo and Columbia: Cuming. — Lond. Journ. III. 527. Jamaica. Purdie.

151. ONCIDIUM SPHACELATUM Lindl., Sert. Orch. sub t. 48. Bot. Reg. 1842, t. 30. Lindl. Fol. 44:

(A) *minus*. Flowers small. Raceme panicled at the base.

(B) *majus*. Flowers larger. A complete panicle.

Remarkable for its brilliant yellow, and the rich brown of the sepals and petals. Its column-wings are always brown at the edges. The two varieties in cultivation seem to be constant in the peculiarities of their respective inflorescence. The buds always, before expansion, curve back the points of the sepals and petals in the form of five recurved horns.

Wild in Guatemala; Malpais—Skinner; Honduras—Loddiges; Mexico—Oaxaca, on trees and rocks, at 2—3000 ft.—Galeotti, 5176; Tabasco—Linden, 1223.

Lindl. Bot. Reg. XXVIII. (1842.) 31:

Pseudobulbis elongato ovatis ancipitibus a latere planiusculis, foliis longis ensiformibus apice recurvis, scapo stricto, racemo composito multifloro, sepalis petalisque lineari-lanceolatis undulatis, labello aequalibus, labello medio constricto basi auriculato apice dilatato rotundato bilobo, crista depressa pubescente a latere dentata apice triloba, columnae alis elongatis truncatis erosis sphacelatis.

Guatemala. Hartweg. Skinner. Mexico. Honduras. Loddiges.

It is immediately known from Oncidium reflexum, Pelicanum, Baueri by the wings of the column, which are long, notched and bordered with brown. Two var. in cultivation, one much handsomer, than the other with larger flowers. This is the inferior sort. — Perigonium luteum, rubropictum.

Lindl. Sert, 48:

Minus α with smaller flowers and the inflorescence composed only at the base and β. majus with brighter yellow flowers and the inflorescence compound as far almost as the apex when the plant is in good health. This peculiarity seems to vary in form of the lip, some of the specimens being almost exactly pandurate.

152. ONCIDIUM KAPPLERI Rchb. fil. in litt. Lindl. Fol. p. 45:

Leaves ensiform, in which respect it resembles O. altissimum. Column-wings crisp, lobed, extended into a toothed truncated ligulate appendage at the base, resting on a pair of projecting angles. Crest $\frac{5}{3}$. Rchb. distinguishes this which seems very near O. altissimum. I have described the details of a sketch sent me by Rchb.: but I have had no opportunity of examining the plant satisfactorily.

Wild in Surinam; Paramaribo, at 1600 ft.—Kappler.

153. ONCIDIUM CAMINIOPHORUM Rchb. fil. in Bot. Zeit. 1852, p. 857. L. F. p. 45:

From a sketch of the foliage sent me by Prof. Rchb., this seems to have the habit of O. flexuosum. The leaves are bluntly emarginate. The flowers rather smaller, „yellow with much brown; lip yellow", with some brown in front of the crest. Column slender with no projecting cheeks; the wings very narrow. Crest with one long blunt principal tooth, at the base of which are three small sharp diverging ones on each side, and at the point two little warts. Rchb., who saw it alive in a German garden, compares it to Suttoni or tenue.

Wild in the Caraccas; Carabobo—Wagener.

Rchb. l. c.:

Pseudobulbis oblongis compressis monophyllis, foliis oblongis basi attenuatis, apice obtuse emarginatis, abbreviatis, panicula diffusa, perigonii phyllis lanceolatis acutis basi cuneatis, labello brevissime cuneato, statim utrinque in lobos rotundatos dilatato, lobo medio ab angusta basi dilatato, transverse rotundo, apice emarginato, callo depresso baseos in dactylos acutos adnatos producto, tuberculis quibusdam additis, gynostemio recto, apice dilatato, fovea stigmatica rotunda, parte infrastigmatica angustiori, depressa, inornata, alis triangulis deflexis minutis pone basin foveae stigmaticae, rostello retusiusculo, trilobulo.

Blüthen gelb mit viel Braun. Lippe gelb, ein paar braunrothe Flecke auf dem Grunde des Mittellappens. *Oncidium tenue* Lindl. und *Suttoni* Lindl. kann man mit diesem vergleichen: sie haben auch dreieckige, aber gespreizte Flügel. Aus Caracas von Hrn. Keferstein nach Kröllwitz eingeführt.— Rchb. fil. in Bonpl. II. 13: Carabobo 6000' März. Wagener.

154. ONCIDIUM BAUERI LO. 200. Lindl. Fol. p. 45:

O. altissimum Bot. Reg. t. 1651.

Often mistaken for O. altissimum, from which it differs in its scape being panicled from the very base, in its longer pseudobulbs, and sharply truncated column-wings.

Wild in the West-Indies and Continent; Dominica—Imray in hb. Hooker.

Lindl. G. Chr. 1850. p. 600. p. 600: differs from Oncidium altissimum by its contracted panicle.

Lindl. Sert. Orch. sub t. 48:

Pseudobulbis oblongis compressis leviter ancipitibus, foliis lato lanceolatis acuminatis scapo erecto multo brevioribus, racemo composito,

sepalis petalisque labelli longitudine lineari-lanceolatis undulatis, labello apice dilatato emarginato medio constricto basi auriculato, crista novem-tuberculata depressa, columnae alis elongatis truncatis utrinque.

Panama and Continent of Tropical America. Nearly allied to Oncid. altissimum in structure of flowers, but very different in its manner of growth, well distinguished by its truncated column—wings.

C. Homoeantha: ** *expansa.* L. F. 45.

155. ONCIDIUM SCHILLERIANUM Rchb. fil. in Bonpl., Ap. I. 1851. L. F. p. 45:

An undetermined specimen of this from Messrs. Booth and Co., of Hamburgh, has been in my herbarium sine 1846. Flowers greenish yellow, clouded with brown. It is a very distinct species, of little beauty, with a loose few-flowered twining panicle. The crest consists of teeth and lamellae placed thus, 5 3 5 / 2 / 2 / 2.

Wild in —

Rchb. fil. l. c. p. 91:

Convolvulaceo scandens flore ex typo illius O. sphacelati, alis tamen angustis utrinque acutis serrulatis aequalibus, stigmatis limbo utrinque unidentato.

Folia oblonga apice attenuata bilobula. Paniculae axes tenues ramosi volubiles elongati. Ramuli flexuosi. Sepala oblonga basi attenuata, summum obtuse apiculatum, lateralia acuto acuminata. Tepala subaequalia nunc paulisper latiora, acuta. Labellum a basi lata triangula (medio tertia angustiori) dilatatum obreniforme; margines postici basilares medio emarginati (hinc bilobuli), margines laterales sensim convergentes. Tuberculatio: centrum a dentibus quadrigeminis occupatum; antepositi dentes majores 3, medio posteriori; apposita utrinque basin versus carina paulo extrorsa 3—4 serrulata. Gynostemium abbreviatum crassum cycnicolle. Alae angustae dolabriformes, serrulatae, utrinque acutangulae, anguli superiores antheram ipsam tegentes, sibi convergentes, anguli inferiores divaricati. Androclinium ascendens, postice triangulum. Fovea oblonga, margines laterales membrana unidentata decurrente marginati, in processus rostellaris ligulati retusi bidenticulati basin coëuntes. Tabula infrastigmatica utroque latere sub fovea angulato producta. Hüllblätter grün, mit braun getigert, später gelb. Lippe goldgelb, braunfleckig. Blüthen so gross, wie die eines mässigen Oncidium sphacelatum. Von Consul Schiller.

156. ONCIDIUM VOLVOX Rchb. in Bonpl., „April I. 1854." Lindl. Fol. p. 45:

Another convolvulaceous species, but with bright yellow flowers. The crest consists of a central keel, with a pair of teeth at its base, and on either side two other keels, one behind the other, and each deeply two-lobed. Cultivated in German gardens.

Wild in the Caraccas—Wagener.

Huc: Rchb. l. c. II. 13. (15. Jan. 1854.);

Pedunculo orgyali volubili ramuligero, ramulis a spathulis abbreviatis fultis, ipsis abbreviatis, flexuosis, paucifloris, bracteis squamaeformibus ovarii pedicellati sextam non aequantibus, sepalis tepalisque lanceolatis acutis basi cuneatis, tepalis subbrevioribus, omnibus margine undulatis, labello pandurato, basi utrinque pone gynostemium angulato, dein emarginato, obtusangulo, sensim et continue a baseos angulis angustato, dein late reniformi bilobulo margine denticulato, callo baseos depresso antice acuto, utrinque tri-quadriserrato, superaddita falcula utrinque pone dentem apicalem nonnullisque nunc pone latera, gynostemio gracili, parte stigmatica ampliata, alis membranaceis rhombeis,

superne acutangulis, basi divaricata latioribus infra obtuse angulatis, nunc margine dentatis, portione infrastigmatica recurva, gracili, limbo tabulae infrastigmaticae utrinque prominulo, apice acutangulo.

Hülle erst grüngelb, dann gelb mit rothen Fleckchen bis gegen die Spitze. Lippe hochgelb, bis zur nierenförmigen Erweiterung roth gefleckt oder (an der Einschnürung) roth gerandet. Blüthen denen eines mittleren O. sphacelatum gleich gross. Diese, die zwei vorigen und die folgende Art sind mir sämmtlich bis jetzt nur aus der ausgezeichneten Sammlung des Herrn Keferstein in Kröllwitz zugekommen. Diese Art muss neben einem gewissen Oncidium Schlimii Linden stehen. Herr Lindley hat die grosse Güte gehabt, Herrn Linden eine Diagnose zu machen, allein sie ist so ausgefallen, dass man eben in Besitz eines Originalexemplars die einzelnen Momente wohl wird constatiren können. „Labello bilobo rotundato basi angustiore auriculato", was heisst das? Geht die Lippe vom schmalen Grunde ununterbrochen erweitert bis zur Spitze? Cristae tuberculis quater ternis und columnae alis utrinque acuminatissimis — das sind die zwei Anhaltepunkte, die mich glauben lassen, dass vorliegende Art eine andere sein muss: ist meine Art dieselbe, so ist jene unkenntlich beschrieben. — Diese Pflanze stand über ein Jahr in Knospe. Keine Ecke ihres Gewächshauses war sicher vor ihren Winkelzügen, überall hin stieg oder kroch die unendliche Rispe bis die Zudringliche, um eine Anzahl Stäbe gewunden, zur Einsicht kam, es bliebe ihr nichts mehr übrig, als, als endlich zu blühen. — Ich habe 15 Fuss Länge davon eingelegt. Caracas Wagener.

157. ONCIDIUM TIGRINUM Llav. et Lex. Orch. Mex., p. 36. LO. 203. L. F. p. 45:

O. Barkeri Lindl., in Bot. Reg. 1841, misc. 174. Sertum Orchidaceum, t. 48.

Odontoglossum tigrinum Lindl. Fol., no. 10.

(B) *unguiculatum* Lindl. in Journ. of Hort. Soc., I. 303, c. ic. xyl. Paxt. Fl. Gard., II. ic. 131.

O. ionosmum Hort.

I have seen no wild specimens of this noble plant, whose panicle of flowers, richly spotted with brown, is sometimes a yard high. The flowers, which have a large yellow lip, smell delightfully of violets. B. has smaller flowers, in a panicle, but is hardly worth distinguishing even as a variety. We owe to the acuteness of Prof. Reichenbach the unexpected identification of O. tigrinum, the „Flor de Muertos" of the Mechoacans, with my O. Barkeri, which I have every reason to believe was obtained by the late Mr. Barker from the West of Mexico. For the reasoning upon which the description of Llave and Lexarza is made to suit O. Barkeri, see Bonpl., Aug. 1. 1855.

Wild in Mexico; on the Irapaean mountains, near Valladolid and Paracho — Lexarza; Mechoacan—Ghiesbreght.

Lindl. Bot. Reg. XXVII. (1841) Misc. 174:

Pseudobulbis ovalibus compressis parum angulatis, diphyllis, foliis angustis erectis membranaceis manifeste petiolo vaginante articulatis, racemi cernui simplicis pedunculo brevioribus, sepalis liberis petalisque lanceolatis undulatis aequalibus patentibus, labelli lobis lateralibus parvis subquadratis intermedio transverso apice inflexo vix emarginato, tuberculo oblongo basi 2—dentato apice obsolete trilobo antice excavato, columnae alis brevibus rotundatis.

Mexico. Barker. Very large flowers of a clear but pale yellow on the lip, and rich brown spotted sepals and petals. The lip is of unusual size, being more than 1½ inch across. It is readily known by its short leaves having a distinct articulation with a sheathing petiole nearly an inch long. The raceme is simple, drooping, of 5—6 flowers altogether a foot long. — Lem. Jard. fl. 62.

O. unguiculatum Lindl. Cf. Walp. Ann. I. 789.

O. ionosmum Lindl. G. Chron. 1853, 12. Novbr. p. 725. c.:

Pseudobulbis ovatis ancipitibus leviter costatis triphyllis, foliis pergameneis angustis undulatis recurvis, racemo elongato nutante, sepalis acutis undulatis lateralibus semiconnatis, petalis conformibus, labello transverso rotundato basi auriculis planis rotundatis aucto ultra auriculas unguiculatas crista rostrata obsolete 5-loba, columnae antice sulcatae alis rotundatis, rostello nano.

Resembles Odontoglossum citrosmum in habit, pseudobulbs, leaves. Flower stem 2' high, raceme of some 20 very large flowers, emitting the odour of Violets. Flowers resemble Oncidium unguiculatum, but they are tetrapetalous. Lip pure yellow, paler below. Sepals and petals spotted with brown. Column has the unusual peculiarity from Oncidium of being deeply chanelled from stigma to the foot of lip.

Odontoglossum tigrinum Lindl. Fol. Odontoglossum p. 5. N. 10:

O. pseudobulbis ovatis ancipitibus 2—3-phyllis, foliis lanceolatis subcoriaceis basi conduplicatis, scapo simplici vel ramoso 3—00-floro, bracteis membranaceis, sepalis petalisque lanceolato-ovatis marginibus revolutis subtus carinatis, labello auriculato ungue convexo margine revoluto obscure denticulato limbo amplissimo carnoso reniformi bilobove undulato, columnae alis subrotundis acuminatis demum stigma claudentibus.

Oncid. tigrinum Llave Orch. Mex. p. 36. L. O. p. 203.

Known only from the description in the work above quoted. Two varieties are mentioned; one with a branched manyflowered spike („near Oncid. altissimum"), the other with a slender, attenuated scape, and very slender flowers („fl. gracillimis"). Pseudobulbs three inches and more in length. Scape two feet high, purplish brown. Flowers 3—5, large, showy, like a tiger's skin, having the smell of the sweetest violets. Sepals and petals yellowish, variegated all over with chesnutpurple tigrine-spots. Lip very large, yellow, not spotted.

It is singular, that a plant like this, used for decoration under the name of „Flor de Muertos" should have escaped all the numerous botanical collectors, who have visited Mexico. It seems from the description to be more like an Odontoglossum, than an Oncidium, and to be related to O. grande, from which it certainly differs in very fragrant flowers, and large yellow spotless lip (labellum maximum luteum immaculatum).

Wild in Mexico; on the Irapaean mountains near Valladolid, and Paracho—Llave.

Huc: *Oncid. unguiculatum* Klotzsch Cf. Walp. Ann. III. 256.

158. ONCIDIUM REFLEXUM Lindl. in Bot. Reg., sub t. 1920. Rchb. fil. Xenia, t. 36, fig. 1. Lindl. Fol. p. 158:

(A) Sepals and petals regularly speckled with brown. Lip with a few red specks at the base.

(B) *pelicanum*. Flowers larger. Sepals bright yellow, spotted with crimson near the base. Lip with a rich crimson stain round the crest.

O. *pelicanum* Martius in Bot. Reg. 1840, misc. 216, 1847, t. 70.

In reconsidering these critically, I doubt their distinctness. They both have the same habit, and the same column and lip; but in B the crest is smooth and seven-toothed, while in reflexum it is downy and five-toothed. But I fear such distinctions are not permanent.

Wild in Mexico.

Lindl. Bot. Reg. XXII. (1837.) sub 1921:

Pseudobulbis ovatis monophyllis, foliis anguste lanceolatis acutis, racemis subcompositis longissimis, pendulis, multifloris, sepalis petalisque linearilanceolatis undulatis acutis reflexis labello aequalibus, labello reniformi emarginato, laciniis lateralibus dilatatis planis, crista depressa tridentata apice bicorni, columnae alis falcatis dentatis.

Mexico. Count Karwinski. — A beautiful species related to O. altissimum. There are specimens in the Royal Bavarian Museum, now in my care and the species is cultivated by Messrs. Loddiges. I mistook a specimen of this plant, preserved in Mr. Lamberts Herbarium, for O. funereum of La Llave, but that species having lenticular depressed pseudobulbs must be different.

Rchb. fil. Xenia I. p. 93. Tab. 36. I.:

Aff. Oncidio caesio Rchb. fil.: pseudobulbis foliisque viridibus, labelli lobis posticis obtuse ligulats retrorsis sensim et breve obcuneatis in lobum medium reniformem apice trilobum paulo latiorem, callo baseos gibberoso plurituberculato antrorsum bicruri, columnae alis semiovatis apice nunc acutis.

Oncid. funereum L. O. 201. Ad. Lindl. B. R. l. c.

„Pseudobulbi ovati monophylli. Folia anguste lanceolata acuta" Lindl. l. c. Pedunculus sesquipedalis ramulis paucis remotis flexuosis paucifloris. Bracteae ovariis pedicellatis (an exsiccatione?) arcuatis multiple breviores. Sepala et tepala cuneato lanceolata acuminata (aequalia) stellata hinc paulo undulata; atropurpurea concolaria fuisse videntur exceptis apicibus pallidioribus. Labellum supra descriptum album fuisse videtur maculis quibusdam atropurpureis supra isthmum et tuberculum. Gynostemium gracile: tabula infrastigmatica utroque margine antico obtusangula.

Sert. sub tab. 48:

Labelli laciniis lateralibus vix intermedia angustioribus, crista depressa tridentata apice bicorni leviter pubescenti, columnae alis magnis falcatis dentatis. Mexico.

Distinguished from O. pelicanum by its smaller flowers having the lip no longer than the sepals and by the lateral lobes of the lip being about as broad as the middle lobe.

Oncid. pelicanum Hort. Monac. Bot. Reg. XXVI. (1840.) Misc. 216:

A specimen from Mr. Bateman, who received it from the bot. garden of Munich shows this plant to be very closely akin to O. reflexum, from which it differs principally in the sepals and petals being less blotched, in the lateral lobes of the lip being smaller in proportion to the intermediate segment, and in the tubercles of the crest, which is smooth, not downy, being rather differently arranged. I am unable to judge how far it may be entitled to rank as a distinct species. The name has doubtless been given in allusion to the column which is not unlike a pelican pecking her breast.

Lindl. Sert. sub 48:

Pseudobulbis ovatis sulcatis monophyllis, foliis anguste lanceolatis acutis, racemis subcompositis multifloris, sepalis petalisque linearilanceolatis undulatis acutis reflexis labello multo brevioribus, labello reniformi emarginato, laciniis lateralibus rotundatis intermedia multo angustioribus, crista glabra basi convexa tunc dentata apice bidentata, columnae alis magnis oblongis denticulatis apice acutis.

Very close akin to O. reflexum, from which it differs principally in the sepals and petals being less blotched, in the lateral lobes of the lip being smaller in proportion to the intermediate segment and in the tubercles of the crest, which is smooth, not downy, being rather differently arranged.

159. ONCIDIUM CAESIUM Rchb. fil. in Regel's Gartenflora, t. 80. Xenia Orch. t. 36. fig. 2. Lindl. Fol. p. 46:

Very like O. reflexum, under which name it was received in Mr. Keil's garden at Leipsig, from Allardt of Berlin. Prof. Rchb. distinguishes it by the short ears of the lip, the larger flowers with a very much more refracted dorsal sepal, and its caesious colour. A fresh flower with which he has favoured me corresponds exactly with his statement.

Wild in ——. Described from a German Garden.

Rchb. fil. Xenia I. p. 94:

Aff. Oncidio reflexo Lindl. Pseudobulbo foliisque caesiis, labelli lobis posticis quadratis retusis divaricatis abrupte ac rectangule in isthmum angustum transeuntibus, lobo medio reniformi bilobo subduplo latiori; callo baseos paucipapuloso antrorsum bicruri, columnae alis dolabriformibus apice obtuse acutis.

Sqq. citata. — Pseudobulbi ovati oblongi compressi utrinque media linea costati: diphylli; pollicem seu sesquipollicem longi, immaculati. Folia lineariligulata erecta, 5—6 pollices longa, medio unum pollicem lata. Pedunculus gracilis erectus subpedalis, apice quadriflorus, brunneus, viridistriatus maculatusque paucivaginatus. Bracteae lineares membranaceae ovarii pedicellati quartam aequantes. Sepala et tepala cuneato lanceolata acuta, margine nunc hinc undulata. Sepalum summum prima jam anthesi, cetera sepala ac tepala demum reflexa. Labellum trilobum, lobi laterales subquadrati obtusanguli et divaricati, lobus medius brevissime angusteque unguiculatus („isthmosus") in laminam illis lobis subduplo latiorem quadratam obtusangulam apice bilobam dilatatus. Callus velutinus tumidus in basi, dorso convexus, apice bicruris cucullo interjecto ac superposito, papulis quibusdam lateralibus. Gynostemium subcurvatum; alae dolabriformes, hinc crenulatae apice obtuse acutae, tabula infrastigmatica prominula, medio excavata, utrinque trapezoidea. Sepala ac tepala caesia parce atropurpurpureo guttata; labellum citrinum.

Gard. Chronicle 1851. 219: This is certainly a mere variety of Oncidium reflexum, with leaves more glaucous, than usual, owing perhaps to bad cultivation. Such differences as are pointed out in the figure and description, if sufficient to establish a species, would lead to the subdivision of every species of Oncidium yet known and to a multiplication of names, which can only render a subject, already sufficiently difficult, altogether impenetrable. The plant has no horticultural value.

160. ONCIDIUM PIRARENSE Rchb. fil. in Linnaea, XXII. 846. Lindl. Fol. p. 46:

Very different from the species near it, except O. sessile, in its large flowers with broad bluntish spreadings, not reflexed sepals and petals. The crest, which is remarkable, is described by Rchb. as a single callosity with three lobes, of which the lateral are angular and obtuse, the middle one longer and emarginate.

Wild in Guiana; near Pirara—R. Schomburgk.

Cf. Walp. Ann. III. 557.

161. ONCIDIUM SUAVE Lindl., in Bot. Reg. 1843, misc. 22. Paxt. Fl. G., II. ic. 185. Lindl. Fol. p. 46:

O. Wendlandianum Rchb. fil. in Bonpl., Ap. I, 1854.

O. macropterum A. Rich. et Galeott. Orch. Mex.

O. Tayleuri Hort.

Its brown reflexed sepals and petals, yellow lip with a broad cinnamon stain at the base, rounded column-wings, and peculiarly straggling inflorescence mark this satisfactorily. In O. Wendlandianum, from the garden of Herrnhausen, for which I am indebted to Prof. Rchb., the leaves are longer and broader, than usual. O. macropterum from Galeotti himself (no. 5046 bis), is also from Oaxaca, and no doubt must be also referred to this place.

Wild in Mexico—Schiede, Galeotti; near Oaxaca, at Teoxomulco, on Pinus Teocote—Karwinski in hb. Monac.

Hue Lindl. l. c. XXIX:

Pseudobulbis ovatis compressis utrinque bicostatis, foliis membranaceis lineari oblongis canaliculatis acutissimis, panicula elongata ramosa, sepalis petalisque linearilanceolatis acutis undulatis revolutis, labelli lobis lateralibus rotundatis intermedio transverso apiculato minoribus, tuberculo pubescente antice 5-lobo apice bidentato, columnae alis rotundatis denticulatis.

Mexico. Loddiges'; very near O. reflexum. The flowers are much smaller, the sepals and petals chocolate colour, tipped with yellow; the lip yellow, with a cinnamon brown middle. The wings of the column are yellow. It has a faint and agreable odour. It was sent to Mssrs. Loddiges by Deppe in the year 1835.

Huc ex Lindl.: Ann. Sc. nat. 1845. p. 26; *Oncid. macropterum* Rich. et Gal. t. 32:

Pseudobulbis ovoideo-oblongis 2-phyllis; foliis lanceolatis; scapo ramoso paniculato, gynostemii alis latissimis truncatis, labelli lobis lateralibus obtusis, intermedio transverso, emarginato. Mexico.

Obs. Oncid. Wendlandianum Rchb. fil. Bonpl. II. (1850) p. 91:

Aff. O. ansifero: recedit tuberculo apice mutico, ungue lobi medii breviori, latiori, tabula infrastigmatica haud ita angulata, alis angustioribus.

Pseudobulbi 4 pollices longi, prope duos medio lati, oblongi, subcompressi, obtuse ancipites, utrinque tricostati, diphylli. Folia ligulata, basi attenuata, bene acuta, subbipedalia, medio paulo ultra bipollicaria. Panicula laxissima flexuosa pro magnitudine pauciflora, quadripedalis. Ramuli pauciflori, pedicelli incurvi, subpollicares bracteas hyalinas lanceas abbreviatas longe superantes. Perigonii phylla oblonga acuta undulata aequalia. Labellum trilobum, lobi laterales dolabriformi rhombei, dorso convoluti, hinc quasi lineares, lobi medii unguis basi labelli dimidio aequilatus, subreniformis, sed basi abrupte hastatus, antrorsum paulo angustatus, apice sinuatus, bilobus cum apiculo interjecto, margine parviorenulatus, tuberculum baseos hemisphaericum pluripapulosum, apice bicrure, regio antepostita velutina (more O. Suttoni). Gynostemium abbreviatum, rectum, crassum, androclinium subobliquum, supra foveam stigmaticam utrinque unidentatam, dentes transversi parvi, processum rostellarem tegentes, fovea ipsa parva transversa, tabula infrastigmatica medio unisulculata; alae angustae, extrorsum retusae minutissime crenulatae, apice acutae. Hülle bräunlich mit Stich ins Olivengrün, endlich zimmtroth; an der Spitze gelb vergestossen. Lippe gelb, mit brauner Querbinde und einige solcher Flecke vor dem Grunde. Cultur des Herrenhauser Berggartens.

Num vere an *Oncid. suave* Lindl. pertineat, mihi non liquet. — Rchb. fil.

162. ONCIDIUM ANSIFERUM Rchb. fil. in Bot. Zeit. 1852, p. 695. Lindl. Fol. p. 46:

Well distinguished from O. suave, which it is very near, not only by the middle point of the crest being prolonged into a downy beak, but by longer and more wavy sepals and petals, a very short column, the cheeks of which, although very prominent, are scarcely discoverable above the crest, and by the crest itself having a lobed tooth on either side at its base.

Wild in Veragua; Chiriqui, at 8000 ft.—Warczewicz.

Rchb. fil. l. c.:

Phyllis oblongo-obovatis crispulis, externis unguiculatis, sensim dilatatis, labelli auriculis basilaribus ligulatis, postico margine curvilineis, labelli cuneo lato sensim angustato, subito in laminam reniformem dilatato, antice emarginato, callo basilari angusto, brevi, antice in rostrum uncinatum attenuato, superne carinato, utrinque trigyroso, gynostemii brevissimi recurvati alis oblongis paucicrenatis, alis corneis inferioribus extrorsum curvatis, ansam simulantibus.

Die fünf Hüllblätter einfarbig, grünlichschwarz (nach der trocknen Pflanze — höchst eigenthümliche Färbung!), mit gelben Spitzen. Lippe goldgelb, mit 2 schwarzbraunen Querbinden am Grunde, welche am Rande in einander übergehen. Nächst O. suave Lindl.! Allein die Verzweigung ganz verschieden, schlaff. Die Handhaben an der Säule, die Farbe und der Schnabel an der Lippenschwiele zeichnen es aus. Chiriqui.

163. ONCIDIUM MICROSTIGMA Rchb. fil. in Bonpl., April I, 1861. L. F. p. 46:

„Sepals and petals orange-yellow; lip pale, almost white." I have a single flower

and a drawing. From the latter it appears, that the crest is very different from that of O. suave, to which I should have otherwise referred it; the centre of the crest consists of three equal sharp teeth, with a very small one in the angles; in addition to which there are two large front teeth, which stand below the others, and curve backward. It is described as having the habit of O. ansiferum.

Wild in ——. Obtained by Rchb. from Consul Schiller's garden.

Huc *Oncid. microstigma* Rchb. fil. l. c. p. 90:

Nulli affine, O. ansifero et Wendlandiano simile, callo duplici, imbricante, postico tridactylo ornithopodo, antico retrorsum semilunato a dactylis illius tecto, alis dolabriformibus.

Panicula laxissima, ramuli erecto ascendentes pauciflori, rariflori, bracteae ovatae, acutae, abbreviatae. Perigonii phylla undulata. Sepala oblonga acuta basi valde angustata cuneata. Tepala subaequalia sessilia. Labellum sepalis vix brevius, trilobum, lobi basilares rotundati obtuse humerati, lobus medius a basi ligulata obcuneata dilatatus, transverse rotundus, obreniformis, inde bilobulus. Tuberculatio in ima basi: tubercula duo transversa sibi opposita ac extremitatibus imposita, posticum trilobum lobis acute triangulis, lateralibus divergentibus interposito utrinque in sicco lobulo minuto (figura hinc ornithopoda); tuberculum anticum semilunatum, apicibus tectis a lobis lateralibus tuberculi postici. Gynostemium cycnicolle (seu incurvum) superne ampliatum. Alae dolabriformes extus minutissime lobulatae, androclinium ascendens, postice acutum; rostelli dens linearis retusus bidentatus parvus, carinae regionis tabulae infrastigmaticae sub ipso stigmate contiguae, dein divergentes, inde marginales. Blüthenblätter orangegelb, Lippe hell, wohl weiss. Rispe u. s. w. stimmt mit *Oncid. ansiferum* Rchb. fil.

164. ONCIDIUM POLYCLADIUM Rchb. MSS. Lindl. Fol. p. 47:

O. folio lanceolato-lorato, panicula homoeantha longa angustissima ramulis spathaceo-bracteatis valde flexuosis sub-quinque-floris, sepalis petalisq. lanceolatis undulatis acutis, labelli lobis lateralibus runcinatis subito in intermedium duplo latiorem subrotundum bilobum transeuntibus, crista triloba adjectis dentibus 2 sub apice et 2 alteris juxta basin, columnae alis triangularibus acutis buccis conicis.

Flowers seem to be coloured as in O. Baueri; but they are as small as in O. pentadactylon, and appear in a long, very narrow raceme, the lateral branches of which are not more than one inch and a half long, in about fourflowered right-angled zigzags. The spathaceous bracts are as long as the internodes, or even longer.

Wild in Costa Rica. Veragua; Chiriqui—Warczewicz.

165. ONCIDIUM TENUE Lindl., in Journ. Hort. Soc., III. 76, c. ic. xyl. L. F. p. 47:

Pseudobulbs extremely thin. Flowers in a straggling raceme or imperfect panicle, the size of those of O. suave. I have had it from Sir Philip Egerton with pseudobulbs as broad as the hand, and a panicle four feet long. The supposed variety mentioned in the seventh Vol. of the „Hort. Soc. Journal" will be mentioned further on (see no. 169).

Wild in Guatemala—Hartweg; Mexico, near Oaxaca—Galeotti, 5824.

Cf. Walp. Ann. I. 789. — Journ. Hort. Soc. III. p. 77:

A small Oncid remarkable for its exceedingly thin pseudobulbs, which although 2—3 inches long, are not more than ⅙ of an inch thick in the middle, from which they gradually fine away into an edge, which is almost acute. The leaves are thin oblong lanceolate, and much shorter than the slender narrow racemose panicle, the branches of which are nearly of the same length, each bearing 3—4 flowers. The latter are not unlike those of O. Suttoni in size and colour, that is to say, yellow, mottled with brown.

This species is distinct from Oncid. suave by its broader leaves and acutely triangular column wings; and from O. citrinum by its roundish oblong pseudobulbs, large column wings, broad leaves, habit etc.

166. ONCIDIUM SUTTONI Bateman in Bot. Reg. 1842, misc. 8. Paxton Fl. Gard., II. ic. 129. Lindl. Fol. p. 48:

A species of little interest, with narrow grassy leaves, and very long drooping panicled racemes, of dull yellow and brown flowers.

Wild in Guatemala; Medio Monte, where it grows with O. ornithorrhynchum—Skinner.

Lindl. B. Reg. XXVIII. l. c.:

Pseudobulbis ovatis compressis sulcatis diphyllis, foliis linearibus gramineis saepe scapo aequalibus, scapo simplici vel ab ipsa basi paniculato angusto ramulis 3—5-floris, sepalis petalisque lineari-lanceolatis, planis, labello oblongo basi auriculato angustiore, tuberculo cristae 7—9 dentato, columnae alis triangularibus.

Mexico. Skinner.

The grassy leaves often as long as the erect panicles although sometimes much shorter, give it a peculiar appearance, added to which the sepals and petals are a dull olive brown without any spots, except at the point, where they are yellow, while the lip has also but one dull olive brown without any spots, except at the point where they are yellow, while the lip has also but one dull olive brown spot occupying the centre of the base.

Capt. *Sutton* R. N. brought many valuable plants to England from America.

Pseudobulbs 1—1½" high, flower stems few flowered, usually shorter, than the leaves and drooping. Occasionally the spike is longer, and a little branched, but this is very rare. Bateman.

Sert. sub 48: The triangular form of the wings of the column will readily distinguish it from O. pergameneum, which has also the lip broadest at the base and entirely different leaves.

167. ONCIDIUM LEUCOCHILUM Bateman Bot. Reg. t. 1920. Orch. Mex. t. I. L. F. 49:
Cyrtochilum leucochilum Planchon, Fl. des Serres, t. 522.

(B) *digitatum*. Fingers of the crest nine at least, instead of five.
O. digitatum Lindl. in Benth. Pl. Hartweg., p. 94. Paxton l. c. ic. 138.

Many varieties in colour of this beautiful plant are found in gardens; one with chocolate-brown stains on the flowers, another with brown flecks on a green ground, and a third of one dull olive-brown tint. In all of them the lip is snow-white when first open, becoming yellowish afterwards. But I have seen with Sir Philip Egerton a flower just opened, the lip of which was perfectly yellow; the other flowers having white lips as usual. According to Mr. Skinner, the summer temperature of the country where this species grows wild is between 55° and 70°; he adds that in December, 1832, the thermometer in Guatemala, at 6 A.M., in the open air, for three days, averaged 36°, and yet the plants continued to shoot their young stems.

Wild in Mexico; on mountains near Malacatan—Hartweg; Guatemala, in the cold districts—Skinner.

Bot. Reg. XXIII. 1837. sub 1920:

Foliis —, pseudobulbis —, scapo alte paniculato longissimo, sepalis petalisque oblongis obtusis subaequalibus patentissimis, labello reniformi alte bilobo utrinque emarginato, laciniis lateralibus retusis nanis, crista tricorni basi utrinque dentata, columnae alis acinaciformibus dentatis. („crenulatis" in Bat. Mex.).

A noble species with all the habit and stature of Oncidium Baueri. Flowers greenish, banded with crimson; lip pure white.

Bat. I. 37:

Pseudobulbis ovatis sulcatis 1—2phyllis, foliis ensiformibus recurvis solitariis geminisque scapo exaltato panicula multo brevioribus etc.

WALPERS.

ANNALES BOTANICES
SYSTEMATICAE.

TOMI SEXTI

FASC. VI.

AUCTORE

D^R. CAROLO MUELLER BEROL.

LIPSIAE.

SUMPTIBUS AMBROSII ABEL.

1864.

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Sert. sub 48. (1841.) Mr. Skinner: inhabits countries the temperature of which is not less than 55° or 70°. In Dec. 1839 thermometer at Guatemala at 6 in the morning in the open air for 3 days averaged 36° Fahr. and yet this species continued to shoot its young stems.

Oncidium digitatum Lindl. Benth. Hartw. 94:

Pseudobulbis ovalibus nitidis compressis diphyllis, foliis lineari-oblongis patulis obtusis, scapo stricto racemoso paniculato, ramis lateralibus paucifloris, sepalis liberis petalisque oblongis planis, labello obovato bilobo basi auriculato, crista pentadactyla digitis filiformibus ascendentibus intermedio integro lateralibus bipartitis, columnae alis acinaciformibus denticulatis. Guatemala.

Near O. leucochilum like which it has a white lip; numerous fingerlike processes of that organ readily distinguish it.

168. ONCIDIUM OBLONGATUM Lindl. in Bot. Reg. 1844, misc. II. Paxton l. c. ic. 137. Lindl. Fol. p. 48:

O. xanthochlorum Klotzsch, fide Rchb. in litt.

Flowers large, clear sulphur-yellow, with a few pale reddish-brown spots. Petals rather wider than sepals, and much more blunt. Lip with the middle lobe deeply fissured, inclining to four-lobed, the outline being bluntly angular. I have a sketch of this with three stigmatic glands; one in the usual place, and the two others at the base of the two column-wings.

Wild in Mexico—Loddiges.

Lindl. Bot. Reg. XXX:

Facie et structura O. reflexi, sed petalis oblongis obtusis apiculatis patulis, planis, labello alte bilobo, columnae alis rotundatis crenulatis dimidiatis.

It is almost impossible to find words, that will well distinguish the Oncidia allied to reflexum, and yet they appear to merit distinction. This which is from Mrss. Loddiges, has very much the appearance of O. Wentworthianum, with the same clouded pseudobulbs and speckled flower-stem; but its petals are perfectly flat, not at all reflexed or wavy, obtuse with a little point and clear yellow, with a few reddish brown bars near the base.

It is a very handsome species on account of its flowers having as much yellow in them, and being as large, as the best variety of O. sphacelatum.

Huc forsan: *Oncid. xanthochlorum* Klotzsch Semin H. Berol. 1852. p. 13:

Pseudobulbis parvis, breviovalibus nitidis, compressis, ancipitibus, diphyllis, foliis membranaceis, rigidis, erectis, oblongis, brevissime cuspidatis, inferne attenuatis, conduplicatis, dorso carinatis, scapo subsimplici arcuatim recurvo brevioribus; bracteis aridis lanceolatosubulatis; perianthii foliolis exterioribus interioribusque oblongis, basi apiceque angustatis, acutissimis, disjunctis, subaequalibus, patenti recurvis subundulatis, labello brevioribus pallide viridibus, dilute fusco maculatis; labello citrino immaculato, lobo medio lato reniformi emarginato, laciniis lateralibus patentierectis obtusis, crista glabra convexa multituberculata, antice tridentata, dente medio breviore; columnae alis magnis patentibus, truncato denticulatis.

169. ONCIDIUM DELUMBE Lindl. Fol. p. 48:

O. tenue grandiflorum Lindl. in Hort. Soc. Journal, VII. 271. ic. xyl:

Whole habit that of O. tenue, with the same thin pseudobulbs and loose straggling panicle. But the flowers are larger, the back sepal is so much reflexed as to be

almost parallel with the peduncle, giving the flower a brokenbacked appearance, the the lip is broad at the base, etc.

Wild in Guatemala-Skinner.

170. ONCIDIUM NEBULOSUM Lindl. in Bot. Reg. 1841, misc. 175. Lindl. Fol. p. 48:

O. Geertianum Morren in Ann. Gand., Feb. 1848.

O. Klotzschianum Rchb. fil. in Bot. Zeit. 1852, p. 695.

A flower from Prof. Rchb. identifies the second synonym. The plant is rarely seen in gardens. Like so many others this varies in the size of its flowers, which, however, are always pale yellow, with faint spots of brown at the base of the lip, and on both sepals and petals.

Wild in Guatemala—Skinner; Veragua, Chiriqui, at 4—5000 ft.—Warczewicz.

Bot. Reg. XXVI. (1841) Misc. 175:

Pseudobulbis ovalibus ancipitibus nervulosis diphyllis utrinque tricostatis, foliis angustis chartaceis panicula angusta brevioribus, sepalis liberis petalisque lanceolatis undulatis patentibus, labelli lobis lateralibus nanis rotundatis intermedio subrotundo bilobo, tuberculo sulcato tridentato, columnae elongatae alis acinaciformibus denticulatis.

A fine species with something the appearance of O. reflexum, but readily known by its clouded pseudobulbs. The flowers are large, rather pale yellow, with faint spots of brown at the lip and on the sepals and petals. It is a native Guatemala, whence it has been sent to the Hort. Soc. by Mr. Hartweg.

Huc: *Oncidium Klotzschianum* Rchb. fil. in v. Schl. *Bot. Ztg.* 1852, p. 695:

Perigonii phyllis cuneatis oblongis acutis, lateralibus internis magis dilatatis, labelli lobis lateralibus auriculaeformibus, obtusatis, sensim in unguem lobi medii attenuatis dein reniformis, bilobi, callo baseos continuo parvo, antice utrinque late tridentato, dorso carinato; gynostemii alis rhombeis, margine exteriori denticulatis, angulo superiori longe acuminatis, androclinium excedentibus, lamella transversa suppposita gynostemium utrinque excedente.

Prächtige goldgelbe Blüthe mit dunkelrothen Flecken auf den Hüllblättern und dem Lippengrunde. Nächst *Oncidium pelicanum* v. Mart., aber durch Säulenflügel weit verschieden. Rispe gedrängt, niedrig. Blätter länglich, spitz. Chiriqui Cordilleren 4—5000′.

Huc: *Oncid. Geertianum* Morr. fid. Lindl. Paxt. Fl. G. I. 23.

171. ONCIDIUM CALDENSE Rchb. fil. in Linnaea, XXII. 846. Lindl. Fol. p. 49:

A straggling plant, with yellow flowers spotted with brown. The petals are broader than the sepals, more ovate, and like them very acute. The crest consists of five long, blunt, somewhat cylindrical, rugged processes next the column, and three others rather larger in front. It is much like ramosum (no. 185), but the crest is totally different, with none of the additional threads and varicosities of that species. It also seems to be a plant with a more lax panicle.

Wild in Brazil; Minas Gerães—Regnell; Gongosoco—Loddiges.

Cf. Walp. Ann. III. 557.

172. ONCIDIUM REICHENBACHII Lindl. Fol. p. 49:

O. foliis oblongo-loratis obtusiusculis, panicula elongata angusta debili ramulis retrofractis flexuosis, sepalis petalisque lineari-lanceolatis acuminatis undulatis, labello obtuse lunato bilobo lobis posticis rectangulis rotundatis latiore, cristae dentibus juxta columnam acervatis in fronte tribus filiformibus, columnae alis hastatis acuminatissimis.

The very imperfect definition given of O. maizaefolium in the „Orch. Lindenianae" has led to this plant being taken for it by Prof. Reichenbach. It differs in the lower angle of the column-wings not being extended downwards into an acute lobe, and in

its long narrow panicle, with divaricating branches. The flowers are said to be „yellow spotted with brown" in Ocanna, and „yellow spotted with red" in Merida. My specimens of the first are also stronger than the other, with less zigzag side branches. I propose to name it in honour of my very sharp-sighted and indefatigable fellow-workman in this difficult mine.

Wild in New-Grenada; in the province of Ocanna, at 5000 ft.—Schlim, 27; Venezuela, at Lagunets, in the province of Merida, at 7000 ft.—Fünck and Schlim, 1030.

O. maizaefolium Lindl. (?) Rchb. fil. Bonpl. II. 279: Es ist unmöglich, nach der Diagnose die Art ganz sicher zu bestimmen. Jedenfalls steht sie nächst *pictum* Hb. B. Kth. und ist eine wahre Prachtpflanze wegen der unzähligen schön gefärbten Blüthen. Ocanna. Juli. 5000'. Nr. 27. Schl.

173. ONCIDIUM MAIZAEFOLIUM Lindl. Orch. Lind. no. 78. Lindl. Fol. p. 49:

Leaves nearly one inch and a half wide, coarsely ribbed (when dry). Flowers in a very large entangled branching panicle. „Petals bright yellow, spotted with red. Lip pale yellow." Very distinct from the preceding. I have it from Mr. Rchb. as O. Schlimii? gathered in N. Grenada, by Warscewicz.

Wild in Venezuela; forests on the slope of the Sierra Nevada, in the province of Merida, at 7000 ft.—Linden.

Lindl. l. c. O. Lind.:

Foliis lanceolatis multinerviis, panicula ramosissima imbricata ramulis flexuosis, sepalis petalisque lineari-oblongis obtusis undulatis patentissimis, labello apice reniformi basi triangulari pubescente crista multidentata, columnae alis acinaciformibus sursum elongatis.

Sierra Nevada in the province of Merida. August. Pseudobulbs oval ribbed; stem two feet high. (Nr. 681.).

One of the herd of species allied to O. reflexum and pictum. The leaves are a foot long, or less.

174. ONCIDIUM SESSILE Lindl. in Paxt. Fl. Garden, t. 21. Lindl. Fol. p. 49:

The large golden-yellow flowers rival those of Cavendishianum. Their broad oblong sepals and petals, with a few cinnamon spots at the base, are remarkable. O. pirarense (no. 160), with flowers of a similar form, has long auricles to the lip, and a totally different crest.

Wild in the Caraccas; Santa Martha—Purdie.

Lindl. l. c. cf. Walp. Ann. III. 555.

175. ONCIDIUM ENSATUM Lindl. in Bot. Reg. 1842, misc. 15. Lindl. Fol. p. 50:

Panicle very open, once only branched, gracefully bending at the point, with conspicuous herbaceous mucronate bracts. Leaves narrow, like a straight two-edged sword.

Wild in Guatemala—Skinner; Mexico: near Oaxaca—Hartweg.

Lindl. Sertum 1841 sub 48:

Pseudobulbis subrotundis compressis, foliis ensiformibus strictis carinatis, panicula longissima multiflora, bracteis membranaceis acutis canaliculatis, sepalis petalisque lanceolatis acuminatis subundulatis, (olivaceis luteo-marginatis), labello (luteo) reniformi emarginato basi auriculato (disco olivaceo) crista pubescente subseptemtuberculato tuberculis elongatis, columnae alis emarginatis utrinque acutis.

Guatemala.

Singular long sword shaped erect leaves, panicle like that of altissimum. Flowers yellow in the lip and on the border of the segments, about olive brown in the middle of the lip and the face of the segments.

176. ONCIDIUM DICHROMATICUM Rchb. fil. in Bonpl., Ap. 1, 1855. L. F. p. 50:

The leaves of this are undescribed, and I am not certain how it is to be distinguished well from O. ensatum. The flowers are smaller, and the sepals and petals shorter, the latter being somewhat the widest. In the crest it would seem that more distinctions occur; for according to a sketch by Mr. Rchb., that of O. dichromaticum is two-lobed at the base, with only a pair of long legs in front, and a short tooth between, while in O. ensatum it is distinctly five-lobed, in addition to the two front legs. These would seem to be sufficient differences.

Wild in ——. Cultivated by Booth and Sons, of Hamburgh.

Rchb. fil. in Bonpl. III. 215:

Aff. O. tigrato tepalis bene acutis, callo velutino sexdentato, gynostemii recti alis utrinque acuminatis.

Pseudobulbi maculato nubeculosi. Panicula —. Sepala lanceolata acuta undulata. Tepala oblonga obtuse acuta, magis undulata. Labellum a basi subcordata utrinque auriculatum, dein late constrictum, ac subito cordatum, margine sinuatum, apice bilobum lobo altero alteri imposito. Callus baseos velutinus oblongus, basi latiori utrinque extrorse bilobo, apice in carinas duas exiens. Gynostemii alae angustae utrinque falcatae. Tabula medio utroque margine emarginato. Foveae limbus dimidio superiori latius marginatus. Blüthen so gross wie die des O. Baueri, gelb und braun. Lippe auf schmalem Mittelstück braun mit wenigen gelben Fleckchen. Hüllblätter dicht braun gewölkt auf gelbem Grunde. — Cultur der Herren Booth und Söhne.

177. ONCIDIUM GUTTULATUM Rchb. fil. in litt. Lindl. Fol. p. 50:

The following is Prof. Rchb.'s description: — „Sepala lanceolata, acuta, undulata, ultra medium basin usque brunneo picta. Tepala (Petala) latiora, undulata, apicibus inflexis. Labelli sessilis auriculae basilares obtusae in isthmum obcuneatum constrictae; apex basi aequilatus, reniformis, bilobulus. Isthmus brunneo fasciatus. Callus baseos (crista) depressus, minute pulverulus, panduratus, apice tridentatus, lateribus hinc minute serrulatus, albidus, fusco-guttatus. Gynostemium (Columna) curvatum, gracile; rostellum trilobum; alae angustae quadratulae, utrinque obtusangulae." — The appearance of the specimen before me is that of Onc. lentiginosum.

Wild in ——. Obtained from the garden at Herrenhausen.

178. ONCIDIUM CRUCIFERUM Rchb. fil. in Bonpl., May 1, 1854. Lindl. Fol. p. 50:

Near O. excavatum, but with a cruciform crest toothletted at the end beaked in the disk, with retuse somewhat lobed column-wings. Panicle long, with a few distant straight branches, the lowest of which are fiveflowered. Intermediate as to petals between the macropetalous and micropetalous groups. Auricles of the lip with long narrow ungues. — Rchb. fil. In my solitary flower the isthmus connecting the base and apex of the lip is very long, and the crest is remarkable for a long downy incurved horn standing at right angles to a pair of flat emarginate teeth; in addition to which there are four warts, two below the teeth, and two at the base of the horn.

Wild in Peru—Warczewicz.

Rchb. fil. Warczewicz l. c. II. 109:

Aff. O. excavato callo cruciformi apice denticulato, disco rostrato, alis retusis lobulatis.

Panicula elongata: rami rari, remoti, recti, seu vix flexuosi, infimi —5flori, bracteae spathaceae acutiusculae ovaria pedicellata quarta parte aequantes, sepalum summum a basi angustissime cuneata lanceolatum acutum, undulatum, sepala lateralia subaequalia, longius unguiculata; tepala sessilia seu subsessilia paulo latiora, labellum basi angusta cuneatum, dein utrinque oblique retrorsum ligulato retusoque auriculatum, auriculae antice in unguem linearem longum angustatae; labelli portio

antica oblongo transversa basi utrinque semicordata, apice bilobula, ceterum hinc minute lobulata, quam portio basilaris paulo latior; callus basilaris depressus subvelutinus, utrinque antrorsum in brachium lineare apice retuso denticulatum expansum antice in cristam ancipitem velutinam excurrens, cui addita utrinque basi et apice cristula antrorsa; gynostemium gracile incurvum; alae angustae trilobulae, tabula ab apice angusto dilatata; rostellum reflexum, ligulatum breve. Eine unverkennbare Aehnlichkeit mit Oncidium excavatum Lindl. [...] mit dem es eine Art Mittelglied der Macro- und Microtepala bildet. Dies hat eine kurze Säule, mit breiteren, beilförmigen Flügeln; die Sepala sind sich gleich lang und am Grunde viel breiter; die Lippe ist vorn und am Grunde gleich breit, hat kein herzförmiges, sondern ein keilförmiges Vorderstück und vorn in der Mitte einen zahnförmigen Zipfel; die Grundschwiele ist anders gebaut. Bei beiden steigt die Lippe am Grunde etwas an. Peru v. Warczewicz.

179. ONCIDIUM CEREBRIFERUM Rchb. fil. in Bot. Zeit. 1852, p. 695. L. F. p. 50:

Much like the last in the form of the flowers; but the column is very short, with its cheeks verruciform, prominent, and almost hidden by the crest. Of the latter the centre is occupied by a thick, downy, blunt tooth, on each side of which are about four smoother short tubercles. It is very much like O. unciferum (sp. 162), with which it must be further compared.

Wild in Veragua; Chiriqui, at 4—6000 ft.—Warczewicz.

Rchb. fil. Bot. Ztg. 1852. p. 695:

Perigonii phyllis cuneatis, oblongis, acutis, undulatis, subaequilongis, lateralibus internis latioribus, labello basi biauriculato, auriculis obtusis, lobo medio a basi late cuneata subito dilatato, oblongo transverso; antice emarginato, margine leviter crenulato, callo basilari parvo rotundato, ex acervulo callulorum lato carinatorum 7—9 congesto, cerebrum aemulante, gynostemii recurvi alis dolabriformibus microscopice crenulatis, baseos lamellis 2 marginalibus.

Rispe ähnlich gebaut, wie die des O. Baueri. Blüthen so gross, rothbraun mit schmalem gelben Rand. „Lippe weiss, am Grunde fleischroth, der Buckel violett." Chiriqui.

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§ 12. Verrucituberculata.

Analysis of the Species.

Columna aptera . . . . 180. *panchrysum*.
„ alata.
alae angulatae
excisae basi acutae.
sep. et pet. linearia obt. apiculata . . . . 181. *auriferum*.
„ „ lanceolata acuminata . . . . 182. *armillare*.
excisae basi cordatae . . . . 183. *foveatum*.
alae indivisae rotundatae.
crista varicosa rugosa, panic. corymbosa . . . . 184. *rupestre*.
crista lamellata, panic. saepius divaricata . . . . 185. *Batemannianum*.

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180. ONCIDIUM ANOMALUM Rchb. fil. Linn. XXII. 845. (1849.) Cf. Walp. Ann. III. 567. Lindl. Fol. p. 51. sub 180. false proposito nomine Lindleyano Onchl. panchrysi;

A very pretty species with small pure yellow flowers in a close pyramidal panicle, all the green parts covered with a delicate bloom, wherefore I once gave a specimen

from Mr. Linden the name of O. glaucescens. I have never seen the crest in the state described in the „Linnaea;" but have invariably found it to consist of a central three or four-toothed ridge, with a pair of elevated lines in front, and a few free warts on either side.

Wild in New-Granada; province of Pamplona, at 8000 ft. — Funck and Schlim, 1432; province of Ocanna and Sota, at 7500 ft. — Schlim, 1018; Socorro—Linden, 123.

Rchb. fil. Bonpl. II. 279:

Diese Art bietet eine obenhin so zarte Inflorescenz, dass man sie bequem mit der des Oncidium ornithorrhynchum vergleichen kann. An der Stelle der in der Linnaea beschriebenen Schwielen steht bisweilen eine einzige flachgedrückte vorn zweizähnige Schwiele. Häufig findet man zwei lappige parallele Schwielen und darum herum einige warzige Buckel. — Neu-Granada: Provinz Pamplona. „La Baja." 8000'. Januar 1849. Nr. 1184. Schlim.

Lindl. in Journ. H. S. IV. 267. 1849. c. xyl. *Oncidium panchrysum* Lindl.

Foliis brevibus ensiformibus, obtusis strictis paniculae patulae pedunculo aequalibus, sepalis ovatis acutis planis liberis, petalis conformibus subundulatis, labelli trilobi lobis lateralibus rotundatis crispis basi pubescentibus, intermedio bilobo rotundato fere aequilatis, crista plana apice subquadriloba verruculis quibusdam sparsis utrinque, columna aptera.

New-Granada. Socorro. Lindl. Herb. 1432.

A small species with an erect branching panicle of pure yellow flowers. From the roots to the top of the panicle is not much than a foot, even in the wild specimens. The leaves are about 6 inches long, erect, obtuse and as high as the patch of the panicle. Among the peculiarities of the plant is the presence of two little patches of fine down at the very base of the lip where it comes in contact with the column. I have received flowers from various anonymous correspondents. It belongs to a group of which the well known O. pulvinatum may be taken as the representent.

181. ONCIDIUM AURIFERUM Rchb. fil. in Linnaea XXII. 847. Bonplandia Ap. I, 1854. L. F. p. 57:

Very like O. panchrysum, from which its great column-wings distinguish it. Its flowers are not whole-coloured, but marked with brown even on the lip.

Wild in New-Granada; Merida, at 7000 ft. — Fünck and Schlim; Wagener.

Cf. Walp. Ann. III. 558. — Rchb. fil. Bonpl. II. 13. l. c.:

Merida 7000'. Diese Art hat ein höchst eigenthümliches Aussehen. Die Hüllblätter scheinen grüngelb, sie sind kurz und auf der untern Hälfte querbandirt. Die geigenförmige hochgelbe Lippe ist vorn breiter als am Grunde, und daselbst sehr ungleich, 2—3lappig, auch 4lappig, mit 2 grossen Aussenlappen und 2 kleinen spitzzungigen Innenlappen. Der hintere breite Theil hat Purpurflecken und einen mehr oder weniger kerbzähnigen Rand. Die Schwielen am Grunde scheinen veränderlich, gewöhnlich findet man einen breiten Kiel vom Säulenfusse an bis zur Lippenmitte, zweimal gibt er nachdem divergirende Schenkel ab. In der Mittellinie läuft oft eine feine Leiste. Einige zerstreute Buckel liegen gewöhnlich regellos herum auf der Platte. Höchst charakteristisch scheint aber eine Eigenthümlichkeit, die ich früher gänzlich übersah; beiderseits gegen den Grund findet sich eine kleine runde Stelle, welche rauh ist, wie ein Reibeisen. Die Säule ist am Grunde ganz dünn, etwas nach hinten gebogen; die unternarbigen Leisten hören über dem Grunde auf. Die Flügel sind beilförmig, am Aussenrand breiter, oben und unten spitzeckig, vorn oft gezähnelt. Das flügellose *O. panchrysum* Lindl. ist sehr ähnlich. Wagener.

182. ONCIDIUM ARMILLARE L. F. p. 51:

O. habitu omnino O. auriferi, floribus majoribus, sepalis petalisque lanceolatis acuminatis, cristae carinis 3 flexuosis antice in dente valido evanescentibus verruculis circumstantibus.

Another form, extremely like that of panchrysum, but with the column-wings of auriferum. Than the latter the flowers are larger, the sepals and petals lanceolate acuminate, not linear and obtuse with a point, and the crest has three deep wavy keels, each terminating in front in a strong upright tooth. Two other teeth of the same form and size rise in front of these, and about four emarginate warts form a curve on each side.

Wild in Peru — W. Lobb.

183. ONCIDIUM FOVEATUM L. F. p. 52:

O. habitu O. panchrysi, sed floribus duplo majoribus intense luteis cinnamomeo fasciatis, labelli lobo medio maximo basi auricularum loco circulari, crista basi foveata antice bicruri verruculis pluribus interjectis et circumstantibus, columnae alis dimiatis acuminatis cordatis medio emarginatis.

From the three preceding, of which it has the habit, this is immediately distinguished by its large bright yellow flowers banded with brown, peculiar column-wings which might rather be called column-ears, and the form and crest of the lip.

Wild in Peru; sources of the Marannon—Warszewicz.

184. ONCIDIUM RUPESTRE Lindl. in Plant. Hartw. 151. L. F. p. 52:

(B.) *Skinneri.* Lip apiculate. Bracts adpressed.

O. Skinneri Lindl. in Gard. Chron. 1855. p. 629.

Wild in Peru; on walls and rocks in and about Loxa-Hartweg.

A very stout species, with leaves ten to fifteen inches long and two broad, and a stiff pyramidal panicle two feet high and a foot wide. The plant I have called O. Skinneri should, I think, upon final consideration, be regarded as a variety, with close pressed bracts, and an apiculate lip. The other differences which where supposed to exist are probably referable to the different condition of the dried and recent specimens; It is a very fine plant. The branches of the panicle are covered by a most delicate bloom. The flowers, as large as the largest form of O. ampliatum, are a brilliant golden yellow with about three cinnamon blotches at the base of each division, and a stain of the same colour across the lip immediately below the crest and at the base of each division, and a stain of the same colour across the lip immediately below the crest and at the base of its side lobes. The numerous sinuosities of the crest are white.

Lindl. Plant. Hartweg. l. c. 1844 Decbr.:

Pseudobulbis ovatis compressis, foliis oblongo ligulatis erectis scapo rigido brachiatim paniculato brevioribus, bracteis lineari-lanceolatis pedicellis subaequalibus, sepalis liberis concavis obtusis, petalis subaequalibus obovatis undulatis, labelli lobis lateralibus parvis sagittatis, rotundatis, intermedio bilobo, crista verrucosa corrugata linea brevielevata in fronte verrucisque quibusdam sparsim utrinque, columnae alis maximis rotundatis.

Scapus bipedalis et ultra. Flores magni, speciosi. O. picto proximum.

In rupis et muros prope Loxa.

Oncid.. Skinneri Lindl. Gart. Chron. 1855. p. 629:

O. (verrucituberculata) pseudobulbis ovatis ancipitibus obsolete carinatis, folio oblongo-lanceolato 6-complicato apiculato subtus glaucescente scapo ipso valido ter breviore, panicula glauca aperta rigida ramis adscendentibus simplicibus 5—6-floris, dimidia inferiore nuda, bracteis lineari-lanceolatis herbaceis arctissime appressis, sepalis obovato-oblongis acutis dorsali erecto, lateralibus recurvis petalis paulo latioribus crispioribus reflexis, labelli lobo medio oblato apiculato subsessili, lateralibus 'angustioribus rotundatis convexis, crista corrugata inordi-

natim multituberculata dente duplici inaequaliter trilobo a fronte altero saepius emarginato segregato utrinque alis semiovatis denticulatis acutis buccis 2 prominentibus, rostello mutico.

F. 9—10 poll. Scapus ultra 2-pedalis. Flores amplitudine O. ampliati et majores. Proximum O. Batemanniano, sed differt corollae et cristae forma et colore.

Floruit in horto Horticult. Soc. — A Skinner receptum.

184. ONCIDIUM BATEMANNIANUM „Knowl. and Westc. Fl. Cab. III. 183. t. 137." L. F. p. 52. Falsa auct. pro „Parmentier":

(A.) *spilopterum*. Flowers racemose. Sepals and petals green outside, red inside; middle front tooth of the crest much larger than the others.

O. spilopterum Lindl. in Bot. Reg. 1844. Misc. 76; 1845. t. 40.

O. gallopavinum Morren in Ann. Gand. I. 13.

(B.) *ramosum*. Flowers in a very large panicle. Brilliant yellow, with the sepals and petals banded with rich chocolate.

O. ramosum Lindl. in B. R. sub fol 1920.

O. Pinellianum Hort. Soc. Journ. Jan. 1848, c. ic. xyl.

A tall dense erect branching panicle belongs to this, which has the lower sepals much narrower than the petals, which are rather broader than the dorsal one. Its crest consists of three to five short plates at the base, and three others in front, diverging and irregularly lobed; arround which are several other processes, besides a few varicosities towards the edge of the lip. It was formerly cultivated by Mr. Barker, who called it O. anomalum, because its flowering stem grew from the apex of the pseudobulb. Flowers large, brilliant yellow, with the isthmus of the lip and the sepals and petals blotched with the richest chocolate in one variety, and dull red, green outside, in another. A very fine and complete specimen in my herbarium shows how variable the flowers are in size, some on the same panicle being hardly half an inch across, while others are more than an inch. It has evidently a tendency to pass into the dimorphous state. After the most careful examination of the original evidence, I can come to no other conclusion than that all the supposed species, now reduced to one, are mere forms of one another. I also fear that O. caldense. (n. 171) must be reduced to this. That all are Brazilian is unquestionable; and yet it is asserted in gardens that some come from Mexico. Rchb. refers O. stenopetalum of Klotzsch to this species.

Wild in Brazil; Itacolumi, near Villa Rica, in the province of Mines—Martius.

Oncidium spilopterum Lindl. B. R. XXX. (1840). Misc. 76. XXXI. (1845.) tab. 40:

Pseudobulbis compressis oblongis diphyllis, foliis erectis oblongis scapo erecto racemoso brevioribus, sepalis ovatis acutis liberis, petalis conformibus latioribus, labello maximo trilobo subrotundo emarginato apiculato lobis lateralibus nanis obtusis, crista antice triloba jugis quibusdam verrucisque utrinque pone basin quasi 5-loba, columnae alis semicordatis crenulatis maculatis.

Peculiar habit. Loddiges imp. e Brasilia. Its flowers are large and yellow with small brownish purple sepals and petals. The base of the labellum is the same colour, while the wings of the column are clear yellow, spotted with crimson. The flowers grow in an erect raceme longer than the leaves. It may be stationed between O. Lanceanum and Carthaginense.

Oncidium gallopavinum Morr. Annal. soc. 209. d'Agric. and Bot. Gand. Journ. d'Hort. 1845. N. 1. F. 1:

Pseudobulbis ovatis apice attenuatis; foliis binis, planis, lanceolatis, scapo elongato, spica simplici, 7—10 floribus divaricatis, bracteis minimis, ovato lanceolatis, acutis, membranaceis, sepalis liberis, ovatis, undulato concavis, roseo purpureis; petalis ovato lanceolatis roseopurpureis, labelli lobis lateralibus spathulatis, abbreviatis, rubris, intermedio

maximo, elongato, emarginato, obcordato, sinu brevi mucronato, citrino, crista minima, vix bicallosa, tuberculis maximis, rugoso carunculatis, purpureis, columnae auriculis alato explanatis, latis.

Mexico imp. Verschaffelt.

Lindl. B. R. XXXI. 1845. Misc. 46: Morrens figure is so very inexact in its details, that we cannot form any opinion upon it.

Huc: *Oncidium Batemannianum* Parmentier Mss. in Floral Cab. III. (1840) N. 37:

Pseudobulbis ovato-oblongis, compressis, glabris, vix ancipitibus, foliis coriaceis, oblongo ensiformibus, carinatis, acutis, striatis, obverse maculatis, scapo erecto, longissimo, apice ramoso, sepalis lanceolatis, marginato-unguiculatis, supremo arcuato, undulato, lateralibus longioribus marginibus revolutis, petalis spathulatis, valde undulatis, labelli lobis lateralibus nanis, rotundatis, undulatis; intermedio magno, reniformi, apice emarginato; crista carunculis numerosis obsita; columnae alis subrotundatis undulatis.

Perigonii phylla rubra, labellum flavum, basi purpureo striolatum et carunculatum.

Huc: *Oncidium ramosum* Lindl. B. R. XXIII. (1837.) sub 1920:

Pseudobulbis —, foliis ensiformibus, panicula densa ramosa, sepalis angustis acutis, supremo erecto fornicato, lateralibus unguiculatis angustioribus, crista digitato tuberculato squamis $^3/_2$ carnosis interjectis, columnae alis integerrimis. — Brazil. Von Martius.

Scape a foot and half long, much branched, very compact, not at all flexuose. Flowers extremely numerous, yellow and olive, rather smaller than those of altissimum. A beautiful species.

Huc Sert. sub 48: „Pseudobulbis ovatis polyphyllis, foliis ensiformibus, acutis, scapo apice ramosissimo paniculato, petalis oblongis subundulatis, labello subrotundo bilobo basi auriculato, cristae tuberculis 5—crenatis obtusis, columnae alis rotundis integerrimis.

Pale yellow flowers in a branched panicle upon a scape 5 feet high. In its native state the inflorescence is very large. Several fingerlike streaks of brown radiate from the base of the tuberculated crest, whose elevations are disposed in two tiers, the upper consisting of 5 short wavy ridges and the lower of two with a truncated 4 lobed tubercle between them. I do not see, how O. Batemanni differs so far as the fig. and description enable me to judge; nothing is said of the native country of that plant.

Bot. Reg. XXVI. 1840. Misc. 154:

A very fine species, which has flowered with Mssrs. Loddiges imported from Gongo Soco in Brazil. It has gay pale flowers in a branched panicle already a foot square, upon a scape 5′ high, and in its native state the inflorescence is much larger. Several finger-like streaks of brown radiate from the base of the tuberculated crest, whose elevations are disposed in two tiers the upper consisting of fine short wavy ridges, and the lower of two, with a truncated fourlobed tubercle between them.

Huc: *Oncidium Pinellianum* Lindl. Journ. H. Soc. III. 1848. p. XVI:

Flowers very bright yellow, with dark brown blotches and spots on the sepals, petals and base of the lip, in the amount of blotching there is however some variety in different individuals. They appear closely packed in a second manner upon the short branches of a small panicle as is shown in the cut, where 1 represents the column and wings magnified and 2 a flower from which the column and upper half of the lip have been removed. The species is very near O. spilopterum (also called O. gallopavinum) from which it differs in having a branched panicle, sepals and petals larger in proportion to the lip and a crest more broken by at the base into short parallel plates. I am not sufficiently acquainted with the plant to judge it further.

Oncidium stenopetalum Kl. Allg. Gtz. 1855. p. 273:

Pseudobulbis ovato elongatis, apice attenuatis compressiusculis leniter striatis diphyllis, basi trifoliatis; foliis longis angustis erectis lineari-lanceolatis acuminatis, dorso leviter carinatis; racemo basilari longissime pedunculato simplici teretiusculo viridi erecto 20—24 floro; bracteis lanceolatis acuminatis viridibus, inferioribus sterilibus amplexicaulibus distantibus; perigonii foliolis viridi-flavescentibus fuscescenti-fasciatis acutis, exterioribus angustissimis distinctis involutis, lateralibus geniculato-divaricatis, interioribus utrinque attenuatis, latioribus undulato-crispatis; labello trilobo reniformi emarginato, margine undulato, supra aureo, subtus rubro-punctato, lobis lateralibus obovatis subrecurvis, disco rubro-maculato, versus marginem in quoque latere bi-tridentato, medio glabro cristato; crista trilamellata, lamella media elevata crenata, lateralibus interruptis obtuse cornigeris; gymnostemio flavido, dorso bimaculato; alis flavidis brevibus; apice dilatato-truncatis obsolete crenatis.

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§. 13. Basilata. L. F. p. 53.

Analysis of the species.

Panicula heterantha.
- Labellum trilobum apice acutum . . . . 186. *abortivum.*
- „ panduratum, alis dolabriformibus . . . . 187. *heteranthum.*
- „ „ alis obsoletis . . . . 188. *chrysomorphum.*

Panicula homoeantha.
- Stigma rostratum.
  - lab. lob. med. 2-lobo . . . . 189. *ornithorrhynchum.*
  - lab. lob. med. acuto . . . . 190. *trulliferum.*
- Stigma muticum.
  - lab. lob. medius ovatus acutus.
    - sepalis petalisque linearibus longissimis acuminatis. . . 191. *phymatochilum.*
    - „ „ lanceolatis . . . . 192. *hastatum.*
    - petalis latioribus sep. lat. connat. . . . . 193. *ochmatochilum.*
  - lab. lobus medius reniformis.
    - labelli lob. lat. acutis . . . . 194. *raniferum.*
    - „ „ „ dilatatis rotundatis.
      - isthmo elongato cuneato . . . . 195. *Wentworthianum.*
      - „ brevi repando . . . . 196. *pergameneum.*

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186. ONCIDIUM ABORTIVUM Rchb. fil. in Linnaea XXII. 847. L. F. p. 53:

Flowers panicled, for the most part abortive, of a very thin texture. Sepals and petals, which are broader, very acute. Lip equally threelobed, the middle lobe acute, Crest many-fingered. Column-wings ligulate, recurved, denticulate at the end. Stigma rostrate.

Wild in the Caracas—Wagener, Moritz.

Walp. Ann. III. 558. — Rchb. fil. Bonpl. II. 12. Herr Moritz hatte nur ein paar Exemplare gesammelt; auch Herr Wagener versichert, diese eben so schöne, als lehrreiche Art in Caracas auf allen seinen Streifzügen ein einziges Mal gesehen zu haben. Caracas. Wagener.

187. ONCIDIUM HETERANTHUM Pöppig und Endl. N. G. and Sp. I. 34. t. 60. L. F. 53:

What I take to be this plant has a long drooping panicle, with compound flexuose divaricating branches about two inches long at the longest. The column-wings are coarsely serrated. The crest consists of nine to eleven blunt equal teeth, forming a narrow line thus 2
3
2 or 4
2

Wild in Peru; on trees near Pampayaco—Pöppig; Mathews 1917.

Lindl. Sert. sub 48:

Scapi paniculati ramis racemosis divaricatis, floribus sterilibus astylis minutis, perfectorum sepalis oblongo spathulatis planis, labello quadrangulari apice lateribusque emarginato, crista multituberculata, columnae alis ultra medium decurrentibus magnis semisagittatis serratis, anthera rostrata.

Peru.

Leaves about 3, small narrow, on slender pseudobulbs. Panicle 1½' long. Flowers apparently yellow. Remarkable for a mixture of perfect and sterile flowers on the same branches. Details of Pöppig fig. very faulty.

188. ONCIDIUM CHRYSOMORPHUM Lindl. in Bot. Mag. ined. L. F. p. 54:

O. foliis loratis obtusis, panicula pyramidali heterantha ramis recurvantibus flexuosis basi spathaceis, sepalis petalisque obovatis obtusis reflexis, labelli basi latioris apice bilobi isthmo oblongo lobis imbricantibus, crista 3-carinata utrinque versus basin crenata callo crenato utrinque adstante, columna fere aptera basi plana elevata.

Leaves like those of panchrysum, but broader and stouter. Panicle rather taller, about a foot high, with a stiff peduncle clothed with three or four spathaceous sheaths, and similar conspicuous bracts at the base of each branch; quite erect, every division flexuose, with the lateral branches curving downwards. Flowers pure golden yellow, with paler ends, the size of O. panchrysum, with remarkably obtuse sepals and petals.

Wild in the Caraccas; Santa Martha—Purdie.

189. ONCIDIUM ORNITHORRHYNCHUM HBK. LO. 204. Bateman Orch. Mex. t. 4. Bot. Reg. 1840. t. 10. B. M. t. 3912. L. F. p. 54:

This well-known plant, remarkable for its clear rose-coloured flowers, with scarcely a tinge of yellow, in a genus so very generally of that colour, varies much in the size and tint of their parts. In some states the flowers are large and deep-coloured; in others they are small, pallid, and unattractive. It naturally inhabits shady damp places, where the temperature varies between 68° and 75°.

Wild in Mexico; llano verde — Hartweg; Mechoacan — Humb. and Bonpl.; Oaxaca—Galeotti, 5019; Vera Cruz—Linden 195; Guatemala—Skinner; Peru; woods near Pasto—Jameson in hb. Hooker.

Lindl. Bot. Reg. l. c.:

Pseudobulbis ovatis diphyllis, foliis ensiformibus, recurvis, scapo paniculato brevioribus, sepalis lineari-oblongis undulatis, reflexis, omnino liberis; labelli panduriformis lobis lateralibus acutis intermedio bilobo, crista e lamellis 5 crenatis apice rostratis constante, columnae alis cuneatis dentatis, stigmate longirostrato.

Humb. Bonpl. and Kunth n. g. et sp. plant. I. 345. t. 80. (in the coloured copies yellow!) — *O. roseum* Hort.

Skinner found it in Guatemala. Odour = agreable new hay according to Bateman. Humboldt found it 6000 above the sea.

Floral Cab. III. 1840. Tab. 136.

190. ONCIDIUM TRULLIFERUM Lindl. in B. R. 1839. t. 57, L. F. 54:

Panicle short, with a few densely-flowered drooping branches springing from con[...] spathaceous bracts. The petals are wider than the sepals, but not much. The c[...] requires to be re-examined in a fresh state. When dried it loses all form. [...] stigma is rostrate. Flower yellow and brown.

Wild in Brazil; Pedro Bonito—Miers.

Lindl. l. c.:

Pseudobulbis elongatis ovalibus compressis, 2—3-phyllis, foliis ova[...]libus fere aequalibus, scapo radicali rigido semel ramoso, sepalis latera[...]libus distinctis superioribus petalisque concavis, obtusis, labelli lobis la[...]teralibus nanis rotundatis, intermedio trulliformi serrulato, crista verru[...]cosa medio depressa laevi antice dente ascendente serrato apice appen[...]diculato, columnae alis integerrimis ovatis obtusis.

Perigonium flavum, rubro notatum. Brazil. Loddiges. Small close panicle.

191. ONCIDIUM PHYMATOCHILUM Lindl. in Paxton's Fl. Gard. nr. 123, ic. sub t. [...] L. F. p. 54:

The native country of this beautiful thing is unknown. Prof. Rchb. who, like my[...]self, has seen no wild specimen, informs me, that the Hamburgh gardeners are u[...]nanimous in asserting that it came from Brazil. In this country it is reputed Mexican. Its long linear-lanceolate green sepals, banded with brown, remind one of Brassia; while its ivory lip and column just stained with yellow near the base, is that of genuine Oncidium.

Wild in ———.

Paxt. Fl. G. I. p. 78. Nr. 121:

Racemo subpaniculato, sepalis linearibus acuminatis apice recurvis, lateralibus longissimis, labelli auriculis convexis dilatatis crenatis, lobo intermedio unguiculato ovato acuminato, basi multituberculato, columnae alis semicordatis acuminatis.

Flowers greenish, lip snowwhite. Erect, 2 edged pseudobulbs tinged with purple, surrounded by scales, which when young are olive green spotted with crimson. Leaves thin, linear lanceolate oblong. Flowers have appearance of some Brassia. Lip white with yellow tubercles and a few yellow stains.

Mexico. Ic. Xyl. ibid. p. 88. — G. Chr. 1848. 139. — Pescatorea t. 53.

192. ONCIDIUM HASTATUM Lindl. in Paxt. Fl. Gard. vol. I. Nr. 2. L. F. p. 55:

Odontoglossum phyllochilum Morren in Annal. Gand. t. 27.

Odontoglossum hastatum Batem. Orch. Mex. t. 20.

(A.) *flavescens.* Lip straw-colour.

(B.) *atratum.* Lip claret-colour.

Lip always hastate, with the basal lobes white and quadrate. The middle lobe of the crest is so rudimentary, that it may easily escape observation. The crest consists of two parallel principal keels, a point between them, and a short accessory keel on either side at the base.

Wild in Mexico; Oaxaca at 4000 ft.—Galeotti 5085; Mechoacan—Ghiesbreght.

Huc: B. Reg. XXXI. 1845. Misc. 60:

Pseudobulbis oblongis ancipitibus diphyllis, foliis ligulatis basi conduplicatis, racemo elongato paniculato, sepalis petalisque conformibus herbaceis lanceolatis acuminatis, labelli hastati lobis lateralibus truncatis, intermedio ovato acuminato, cristae lamellis 4 parallelis, columnae auriculis truncatis. Mexico.

A plant with the habit of Oncidium leucochilum. The flowers are greenish with red blotches, except the lip, which is white with a purple stain at the base.

Lindl. Paxt. Fl. G. I. p. 10. in „N. Granada."

Huc: *Cyrtochilum Juergensenianum* Lem. Jard. Fl. tab. 268:

Pseudobulbis ovato-oblongis compressis, folio solitario lineari-oblongo apice acuto basi plicato subattenuato coriaceo; scapo flexuoso 8-floro (v. amplius), folio multo longiore segmentis lato-subacuminatis apice subrecurvis luteo-viridibus brunneo ad medium late maculatis, deinde eodem tenuissime punctulatis; labello anguste hastato albido et roseo, lobis auriculiformibus rotundatis, toto tenuissime rubro punctulatis, lamellis elevatis apice truncatis, gynostemate late marginato, lobis rotundatis, albo basi luteo, anthera integra ovata. (Lem. ex bona icone).

Cyrtochilum Juergensenianum Lem. sub. pr. tab. An Odontoglossi spec. (O. Jurg.)? An potius etiam Oncidii sp. (O. Jurg.)? Patria: Mexico prov. Chinantla quo in loco supra truncos quercinos scandens.

193. ONCIDIUM OCHMATOCHILUM Rchb. fil. in Bot. Ztg. 1852. p. 698. L. F. 55:

This is described with olive-green flowers, flecked with golden. Lip white, with brown and violet flecks and bands. Its affinity is undoubtedly with O. phymatochilum; but its lateral sepals are connate at the base, and its petals are three times as wide; on which account it would rather seem referable to the Tetrapetalous macropetalous group (see p. 17). My specimen, for which I am indebted to Prof. G. Reichenbach, is a portion of a long zigzag panicle, the bracts of which are almost obsolete. The flowers are much smaller than in O. phymatochilum, and apparently of a firmer texture. The lateral sepals are linear-lanceolate, canaliculate, united for about a quarter their length, and longer than the other parts. The dorsal sepal and petals are alike lanceolate acuminate and recurved as well as channelled at the end; but the latter are at least twice as wide. The lip is hastate with the lateral lobes rounded, passing into an inversely cuneate isthmus which expands into an ovate lobe, much narrower than the base. The crest consists of six thick short plates, the middle basal one of which has a slightly elevated crest. The column has a pair of very prominent narrow cheeks; its wings are reduced to a pair of pointed rudiments opposite the base of the stigmatic cavity. It would seem to be a very pretty plant when fresh.

Wild in Veragua; Chiriqui—Warscewicz.

Rchb. l. c.:

Panicula flexuosa, diffusissima, perigonii phyllo summo ligulato, acuto, ph. lateralibus externis subaequalibus, acuminatis, basi ima unguiculato connatis, illo tertia parte longioribus, ph. lateralibus internis oblongis acuminatis, prope triplo latioribus, supremo aequilongis, apice recurvis, labello basi lato, marginibus posticis rectis, utrinque auriculato, dein sensim angustius cuneato, antice in laminam reniformem, acutam apice recurvam dilatato, callo basilari erectiusculo, dorso carinato, utrinque biauriculato, gynostemii gracilis utrinque pone foveam angustissime alati alis subintegris, infra utrinque minute auriculato.

Blüthen olivengrün und gelb gefleckt. „Lippe weiss, mit braunen und violetten Flecken und Bändern." Das verwandte *O. phymatochilum* Lindl. hat dreieckige, oben spitze, grosse Flügel. O. nigratum hat gleichlange Hüllblätter. O. trulliferum dazu eine vielbucklige Lippe.

194. ONCIDIUM RANIFERUM Lindl. in B. R. sub t. 1920. 1838. t. 48. B. M. t. 3712. L. F. p. 55:

The flowers are too diminutive to render this useful to cultivators; they are wholly yellow, except the crest and base of the lip, which are reddish-brown. Sometimes the panicle becomes leafy, with a few scattered flowers only at the end of its branches.

Wild in Brazil; Organ mountains—Gardner 637.

B. R. l. c. sub t. 1920:

Pseudobulbis ovatis sulcatis diphyllis, foliis lato-linearibus acutis scapo paniculato brevioribus, sepalis petalisque oblongis acutis patulis, labelli laciniis lateralibus triangulis, intermedia cuneata emarginata, crista depressa medio constricta, dimidio posteriore quadrata basi utrinque callosa medio tuberculata anteriore triangulari, apice emarginata utrinque foveata, alis columnae integris. — Brazil.

A smallflowered species with the lower half of the lip chesnut coloured; it exists in Mr. Knight's coll.

Bot. Reg. (XXIV) 48: native of Brazil. Mr. Descourtilz met with it in damp forests near Bananal. This traveller observed, that it fixes itself to branches not exceeding 12 feet in distance from the earth. — Var. major Hook. B. Mag. 3712.

195. ONCIDIUM WENTWORTHIANUM Batem. in Bot. Reg. 1840. Misc. 194. Paxtons Fl. Gard. II., ic. 127. L. F. p. 55:

There are two varieties in cultivation, of which one, sent me by Sir Philip Egerton, has brilliant yellow flowers much larger than in the original, and barred with the richest possible brown.

Wild in Guatemala—Skinner; mountains of Santa Rosa, in May—Hartweg.

B. R. XXVI. (1840.) Misc. 194:

Pseudobulbis nebulosis oblongis compressis ancipitibus diphyllis, panicula angusta elongata ramulis 3-floris, sepalis liberis petalisque oblongo lanceolatis acutis, labelli cordati laciniis lateralibus rotundatis grosse crenatis intermedia multo brevioribus, intermediae ungue basi lato apice angustiore lateribus rectis lamina reniformi denticulata basi ipsa labelli duplo angustiore, crista 5-dentata denticulis 2 anticis aucta, columnae alis erosis brevibus.

Approaches O. Baueri and altissimum, but the flowers are very differently shaped, and richly stained with crimson upon a yellow ground.

„Is much used in adorning altars." Skinner.

The beautifully mottled pseudobulbs at once distinguish it from every other species; it has flowered here, and I have had it drawn. In habit it is never ½ the size of O. Baueri and altissimum, though it rivals them in the length of its stems; neither does it ever form compound lateral branches from the spike.

In complim. to Lord Fitzwilliam. Bateman O. Mex. 39. 1842. — Lindl. in Benth. Pl. Hartw. p. 94: Santa Rosa Mexici Hartweg!

196. ONCIDIUM PERGAMENEUM Lindl. in Benth. Pl. Hartw. p. 93. B. R. 1842. Misc. 7. L. F. p. 55:

To the pseudobulbs and leaves of O. tenue this almost adds the flowers of Wentworthianum, with the same broad base of the lip and similar spotting. The crest is formed by a heap of about nine short stumpy tubercles. The inflorescence is that of O. suave.

Wild in Guatemala; montana en medio. Aug.—Hartweg.

Lindl. Benth. Pl. Hartw. l. c.:

Pseudobulbis ancipitibus lucidis costatis diphyllis, foliis patentibus pergameneis oblongis acutis undulatis, panicula longissima divaricata, sepalis liberis petalisque lanceolatis acuminatis patentissimis, labello trilobo basi latiore, laciniis lateralibus cordatis undulatis medio subemarginatis, intermedia emarginata apiculata paullo latiore quam longa, cristae tuberculis 5 parallelis linearibus undulatis subpubescentibus, columnae alis triangularibus acutis.

Mexico. Hartweg.

Bot. Reg. XXVIII. 1842. Misc. 7:

Leaves 5—6" long, 1½—2 wide, of a thin parchment like texture. Panicle weak, loose, 2—3" long, much appearance of O Baueri. Sepals and petals wavy and brown tipped with yellow, lip yellow except a dull brown stain on each side of the base of the middle lobe. The lip is in form like that of O. Wentworthianum, that is to say, it is broader at the base than the apex, which is transversely oblong, with a small point in front. The wings of the column are small, short, and curved like a bird's bill with a few obscure toothings on the upper edge.

Lindl. Sert. sub 48:

Very thin pseudobulbs, sharp edged and somewhat furrowed on each side. Leaves in pairs, from 5—6" long by one, and ½—2 inches wide, of a thin parchment like texture, oblong, narrowing down to their base and sharp pointed. The flowers are in a weak loose panicle, about 2—3' long, have much the appearance of O. Baueri. Sepals and petals narrow, sharp pointed, every brown tipped with yellow; lip is a dull yellow; except a dull brown on each side of the base of the middle lobe. Lip in form like that of O. Wentworthianum, that is to say it is broaden at the base than the apex, which is transversely oblong, with a small point in front. Wings of the column are small, short curved like a bird's bill, with a few obscure tothing's on the upper edge.

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§. 14. Glanduligera. L. F. 56.

⁎ It is difficult to find a satisfactory place for O. Papilio; and now that a second species is known, equally furnished with petals and dorsal sepal much longer than the laterals, it seems desirable to associate them in one small group quite apart from the others.

197. ONCIDIUM PAPILIO L. O. 208. B. Reg. t. 910. B. M. t. 2795. B. C. t. 1086. L. F. p. 56: ¡

(A.) Lip yellow, mottled all over with brown.

(B.) *limbatum*. Lip yellow, with a cinnamon-brown border. B. M. t. 3733. B. C. t. 1086.

(C.) *albiflorum*. Flowers white. (A specimen once found in the Caraccas, according to Rchb. fil.)

(D.) *Kramerianum* Rchb. fil. in litt. Xenia t. 33. Flowers denticulate and crisp over all their edge, bright yellow with a few brown spots.

This well-known plant is remarkable not only for its very long linear dorsal sepal and petals, but also for the singular glands which surround the antherbed. They vary somewhat in number and position; but I do not see how any distinction can be derived from their condition.

Wild in Trinidad—Woodford; Caraccas; near Merida, at the height of 4—5000 ft. on precipitous cliffs—Wagener; Dominica—Imray, in hb. Hooker, „not indigenous"; D. on Chimborazo, at 3000 ft. — Warscewicz.

Lindl. Paxt. Fl. G. I. 104:

O. pseudobulbis subrotundis compressis rugosis monophyllis, foliis oblongis coriaceis obtusis maculatis, scapo perrennante debili ancipiti articulato apice paucifloro, sepalo supremo petalisque linearibus longissimis basi angustatis, sepalis lateralibus latis revolutis undulatis, labello longioribus, labelli lacinia intermedia oblonga emarginata subrotunda crispa basi valide angustata lateralibus rotundatis, cristae glandulis forma ranae cubantis, columnae alis serratis. — Trinidad.

No resemblance to others. It probably forms a section (genus?) by itself.

Rchb. fil. Bonpl. II. 13. Caraccas. Merida. October—December. 4—5000'. Meist wächst diese Pflanze an jähen Felsabhängen, sodass die Sammler sich an Seilen herablassen müssen, um sie zu erlangen. Auch eine weissblühende Pflanze wurde einmal angetroffen. Wagener.

197 b. ONCIDIUM KRAMERIANUM Rchb. fil. Xenia I. p. 80. t. 33:

Aff. Oncidio Papilioni Lindl. minus, pseudobulbis obtusis quadri—septangulatis (nec ancipitibus), pedunculi internodiis omnibus teretibus, labello et sepalis lateralibus serrulatis, illo antice crispissimo, carina basilari obtusangula crenata, alis gynostemii inferioribus integerrimis.

Pseudobulbus rotundulus, viridiviolaceus, obtuse quadri—septemangulatus, angulis obtusis. Folium cuneato oblongum acutum valde coriaceum, obscure viride, maculis striolisque atroviolaceis; usque octo pollices longum, supra medium quatuorve latum. Pedunculus more Oncidii Papilionis Lindl. perennis, raro superne ramosus ex axillis vaginarum praesertim lasso internodio supremo. Internodia omnia — et suprema quidem haud minus — tereliuscula, nec ancipitia more *Oncidii Papilionis* Lindl. Vaginae appressae apice acuminatae acutaeve. Bracteae subaequales. Perigonium tenuissimum, membranaceum, telae Dendrobii Palpebrae similiumque plantarum, vix per duos dies bene servatum, flore Oncidii Papilionis, bene culti duabus tertiis minus. Sepalum dorsale et tepala linearia ante apicem acutum paulo dilatata et undulata; brunnea basi flava; ascendentia. Sepala lateralia cuneata ligulata acuta margine minute serrulata, crispa nunc lobulata flaveola maculis brunneis. Labellum (an semper?) per longitudinem complicatum, a basi cordata panduratum, antice valde dilatatum, crispolobulatum, margine denticulato serrulatum; carina baseos obtusangula, lateribus papulosa, vertice crenata; flaveolum brunneo maculatum disco antice unicolori. Gynostemii alae superiores lineares apice capitatae, alae inferiores obtuse quadratae integerrimae. Pollinia sessilia in lamina semilunata brevissima (quam in O. Papilione bis seu ter breviori).

Chimborasso v. Warscewicz.

198. ONCIDIUM LIMMINGHII E. Morren f. in litt. L. F. p. 56:

O. sepalo dorsali petalisque lanceolatis inferioribus quadruplo majoribus, labelli basi latioris auriculis rotundatis isthmo obcuneato elongato in laminam subrotundo-reniformem expanso, crista. . . . ., columnae alis 4 laceris fimbriatis, 2 lateralibus angustioribus, 2 apicillaribus inflexis.

For this very curious plant I am indebted to Mr. Edward Morren of Liège, who has named it after Count Alfred Limminghe, a distinguished Orchidophilist. M. Morren informs me, that it was sent to Belgium, it is believed, from the Caraccas, by Mr. Van Lansberghe, consul for the Netherlands. It has entirely the aspect, at first sight, of O. Papilio on a very small scale. Pseudobulbs roundish, compressed, wrinkled, about three quarters of an inch long. Leaf solitary, little more than an inch across. Peduncle filiform, terete, between four and five inches long, with three membranous close-pressed acute sheaths. The sepals and petals appear to be dull olive-green; the lip the same colour, but paler. The structure of the crest cannot be determined without destroying my solitary flower.

Wild in the Caraccas—Edward Morren.

Species insufficiently known L. F. 57.

Oncidium funereum Llave L. O. p. 201:

Pseudobulbis subrotundis depressis hyalino-virescentibus diphyllis, foliis lanceolatis spithamaeis, scapo tenuissimo simplici elongato, sepalis petalisque aequalibus patulis apice reflexis, labello carnoso convexo emarginato, cristae tuberculis variis denticulisque.

Mexico.

Known only from the description of La Llave. It is said to be used by the people of Mechoacan as an ornament of their tombs. The lip is described as yellow, the segments of the flower as olive-brown spotted. The leaves are a span long.

„*O. filipes?*" Rchb.

Oncidium olivaceum H. B. K. L. O. p. 202:

Bulbo ovato-oblongo, foliis oblongo-lanceolatis, pedunculo simplici multifloro, foliolis calycis carnosis reflexis, labello trifido, lacinia intermedia subreniformi emarginata, gynostemio basi alis rotundatis instructo, apice cucullato.

Popayan.

Leaves three or four inches long. Scape one to two feet high. Petals oblong-acute, shorter than the sepals. Lip very large, with the middle lobe crenulated, fleshy pink, an inch broad, narrowed at the base, with a conical yellow crest; the lateral lobes obliquely ovate, wavy, distinct, spotted with red, from four to five lines long.

„*Oncid. cucullatum?*" Rchb.

Oncid. emarginatum Meyer L. O. p. 206:

Foliis lanceolato-linearibus obtusis emarginatis, floribus terminalibus, labello obovato integerrimo, gynostemii alis ovato subrotundis.

Essequibo.

Caules spithamaei, sulcati. Folia 2—2½ poll. longa. Flores parvi, purpurei, punctis argenteis notati. Sepala oblongo-acuminata, inferiora 2 paululum breviora, acuta. Labellum obovatum, basi attenuatum, integerrimum, planum, supra tuberculis rugaeformibus notatum. Columna brevis, apice alis 2 parvis, patenti erectis, rotundatis instructa.

Obs. Est *Epidendrum stenopetalum* Hook! Rchb.

Oncidium rariflorum Ach. Richard in Ann. Sc. Jan. 1845:

Pumilum, pseudobulbis ovoideis compressis, 1-phyllis; folio lanceolato acuto; scapo radicali 2-floro; gynostemio bialato; labello trilobo, lobo medio obcordato.

Mexico.

Oncid. brevifolium A. Richard l. c.:

Pseudobulbis ovoideis 2-phyllis, foliis ellipticis acutis coriaceis, brevibus; scapo paniculato, subsimplici, floribus luteis maculatis: labelli lobis lateralibus angustis, intermedio orbiculari bifido.

Mexico.

Oncidium amoenum A. Richard l. c.:

Pumilum; pseudobulbis oblongis compressis diphyllis, floribus parvulis paniculatis, sepalis oblongis, reflexis, obtusis, pallide brunneis, labello luteo trilobo, lobo medio obovato, spathulato, emarginato.

Mexico.

Oncidium Ghiesbreghtianum A. Richard l. c.:

Pseudobulbis compressis ovoideis 1—2-phyllis; foliis lanceolatis acutis; floribus pallide purpureis, racemo simplici, labelli lobis lateralibus obtusis, intermedio late obcordato.

Mexico.

1461. LOCKHARTIA *Hook.*

Bot. Mag. 2715.

Rchb. fil. v. Schl. Bot. Ztg. 1862. p. 766:

Ein Blick auf die Tafel XXVII. des Prodromus Fl. Peruv. belehrt mich, dass Herr Prof. Lindley und ihm folgend auch ich Unrecht hatten, die Hooker'sche Gattung Lockhartia nicht anzunehmen. Die Abbildung zeigt Blüthen einer Dichaea und eines (wenn anders treu dargestellten) neuen Centropetalum, das Niemand nennen möge, ehe er nicht dazu Exemplare hat. Man würde wieder zu weit gehen, wenn man eine dieser zwei Lindley'schen Gattungen einziehen wollte. Die Gattung Fernandezia hat gar keinen Anspruch auf Fortexistenz, da sie ein heterogenes Gemenge ist. Die Arten von Lockhartia sind folgende: 1) *L. elegans* Hook. (*F. e.* Lindl.). 2) *L. lunifera* (*F. l.* Lindl.). 3) *L. acuta* (*F. acuta* Lindl.). 4) *L. parthenocomos* (*F. parthenocomos* Rchb. fil.). *Fernandezia longifolia* Lindl. übergehe ich mit Absicht. Ohne Blüthen beschrieben kann sie der Autor selbst nicht wiedererkennen, da mehrere Arten dieselben Blätter und Blüthenstände haben können. Man muss sie fallen lassen. — Bei Teoxomulco in Mexico wächst eine neue Art, deren Blüthen ich nicht kenne; die Blätter sind ganz kurz, sehr breit und decken einander ganz dachziegelich, so dass eine Spitze auf dem Grunde des folgenden Blattes liegt.

Rchb. fil. Xenia I. p. 99: Pollinia pyriformiclavata sessilia in glandula ovata parva: quo charactere deficiente Lockhartia esset inter Oncidia, quod Aporum inter Dendrobia.

Fernandezia fl. Peruv. Lindl. Orchid. 1832—1833). 207.

Cf. tamen Prodr. Peruv. Tab. XXVII.: icones sunt Centropetali et Dichaeae, unde patet, Hookerianum genus esse praeferendum.

Rchb. fil. l. c. p. 101:

Clavis generis.

A. Labellum flabellatum apice quadrilobum.
- 1. Lobi laterales antrorsi dentiformes . . . . *L. acuta* Rchb. fil.
- 2. Lobi laterales divaricati obtusi . . . . *L. pallida* Rchb. fil.

B. Labellum basi trilobum.
- 1. Lobi laterales semiovati . . . . *L. parthenocomos* Rchb. fil.
- 2. Lobi laterales trianguli abbreviati
  - a. Ligula multipapuloso squamata apice obtusa in labelli disco; alae dolabriformes . . . *L. elegans* Hook.
  - b. Ligula parvipapulata apice bidentata in labelli disco; alae triangulae . . . . *L. Weigelti* Rchb. Rchb. fil.
- 3. Lobi laterales lineares elongati.
  - a. Lobus medius rhombeus apice bidentatus *L. micrantha* Rchb. fil.
  - b. Lobus medius ligulatus apice dilatatus.
    - aa. Apice reniformis bilobus . . . . . . *L. mirabilis* Rchb. fil.
    - bb. Apice cuneato dilatatus bilobus . . . *L. Oerstedii* Rchb. fil.
  - c. Lobus medius lateribus quadrilobulus.
    - aa. Lobuli laterales postice sinu interjecto magno ante lobulos anticos; tepala ligulata . . . . *L. lunifera* Rchb. fil.
    - bb. Lobuli laterales apicem labelli versus siti, tepala ovata . . . . *L. goyazensis* Rchb. fil.

A. Labellum flabellatum apice quadrilobum.

1. LOCKHARTIA ACUTA Rchb. fil. in v. Mohl u. v. Schlechtendal Bot. Zeitg. 1852. 767:

Labelli lobo medio ligulato emarginato, lobis lateralibus dentiformibus antrorsis.

Fernandezia acuta Lindl. Bot. Reg. XXI. 1836. t. 1806!

Folia acutata. Panicula pluriflora (terminalis). Bracteae ovatae acutae. Flores longe pedicellati. Sepala ac tepala majora ovata acuta. Labelli basis glomerulo pulvinato onusta ac discus antepositus velutinus apice medio bilobulus. Alae gynostemii triangulae lobulatae apice muticae.

Trinitatis ins. imp. Knight.

Huc: *Fernandezia acuta* Lindl. l. c.:

Foliis acuminatis carinatis, corymbo laxo multifloro, bracteis obtusis membranaceis, labello lineari trilobo laciniis lateralibus rectis abbreviatis intermedia emarginata obtusa, disco pulvinato tuberculo minimo pone basin. — Omnia fere F. elegantis nisi folia et labellum. Hoc pallide luteum disco prominulo pulvinato antice trilobo sanguineo emarginato; laciniis lateralibus nullo modo hastae effigiem referentibus sed laciniae intermediae parallelis.

2. LOCKHARTIA PALLIDA Rchb. fil. in Seemann Bonpl. II. 14:

Labelli lobo medio bipartito, partitionibus ligulatis obtusis, lobis lateralibus obtusatis.

Xenia l. c. p. 102:

Erecta. Folia angusta triangula obtuse acuta inflexa apiculo nunc introrso glauca. Paniculae axillares subterminalesque subdichotomae gracillimae, axillares gratiose deflexae; internodiis elongatis. Bracteae ovatae acutae cordatae amplexicaules. Sepala elliptica, tepala ovata. Labellum basi oblongo cuneatum dein dilatatum trilobum: lobi laterales obtusanguli divaricato extrorsi, lobus medius omnino bipartitus, partitionibus obtusangulis; seu ligulatus bilobus elevatione puberula antice biloba in dimidio basilari; fasciculus papillosus gynostemii pedi antepositus. Gynostemii alae semiovatae apice libero denticulatae. Color florum pallide ochraceus; pulvinari baseos aurantiaco. An praecedentis varietas?

Tab. 39. I. 1—4. — Bonpl. III. 66. S. Marta 300'. Wagener.

B. Labellum basi trilobum.

a. Lobi laterales semiovati.

3. LOCKHARTIA PARTHENOCOMOS Rchb. fil. in v. Mohl und v. Schlechtendal B. Ztg. 1852. 767. Rchb. fil. l. c. p. 104:

Caules elongati, bipedales usque, erecti, demum deflexi, penduli. Folia triangula inflexo acuta. Pedunculi pauciflori spicati nunc ramosuli. Bracteae triangulo ochreatae aristatae acutaeve. Sepala lanceolata acuta. Tepala cuneata obovata duplo latiora. Labellum a basi subcuneata dilatatum trilobum; lobi postici obtusati integerrimi seu denticulati; lobus medius productus emarginatus (nunc cum apiculo); discus inter lobos laterales incrassatus, velutinus; denticuli quidam antepositi. (Tenemus labellum subrhombeum.) Gynostemii alae semiovatae apice acutae. Flores vulgo semiclausi ochroleuci, labelli disco vitellino; in varietate purpurata cum gynostemio purpureo guttata. — Fernandezia p. Rchb. fil. in v. Schl. und v. Mohl B. Z. 639.

Caracas. Wagener. — Xenia I. Tab. 40. II. 3—7.

190. ONCIDIUM TRULLIFERUM Lindl. in B. R. 1839. t. 57, L. F. 54:

Panicle short, with a few densely-flowered drooping branches springing from coarse spathaceous bracts. The petals are wider than the sepals, but not much. The crest requires to be re-examined in a fresh state. When dried it loses all form. The stigma is rostrate. Flower yellow and brown.

Wild in Brazil; Pedro Bonito—Miers.

Lindl. l. c.:

Pseudobulbis elongatis ovalibus compressis, 2—3-phyllis, foliis ovalibus fere aequalibus, scapo radicali rigido semel ramoso, sepalis lateralibus distinctis superioribus petalisque concavis, obtusis, labelli lobis lateralibus nanis rotundatis, intermedio trulliformi serrulato, crista verrucosa medio depressa laevi antice dente ascendente serrato apice appendiculato, columnae alis integerrimis ovatis obtusis.

Perigonium flavum, rubro notatum. Brazil. Loddiges. Small close panicle.

191. ONCIDIUM PHYMATOCHILUM Lindl. in Paxton's Fl. Gard. nr. 123, ic. sub t. 18. L. F. p. 54:

The native country of this beautiful thing is unknown. Prof. Rchb. who, like myself, has seen no wild specimen, informs me, that the Hamburgh gardeners are unanimous in asserting that it came from Brazil. In this country it is reputed Mexican. Its long linear-lanceolate green sepals, banded with brown, remind one of Brassia: while its ivory lip and column just stained with yellow near the base, is that of genuine Oncidium.

Wild in ———.

Paxt. Fl. G. I. p. 78. Nr. 121:

Racemo subpaniculato, sepalis linearibus acuminatis apice recurvis, lateralibus longissimis, labelli auriculis convexis dilatatis crenatis, lobo intermedio unguiculato ovato acuminato, basi multituberculato, columnae alis semicordatis acuminatis.

Flowers greenish, lip snowwhite. Erect, 2 edged pseudobulbs tinged with purple, surrounded by scales, which when young are olive green spotted with crimson. Leaves thin, linear lanceolate oblong. Flowers have appearance of some Brassia. Lip white with yellow tubercles and a few yellow stains.

Mexico. Ic. Xyl. ibid. p. 88. — G. Chr. 1848. 139. — Pescatorea t. 53.

192. ONCIDIUM HASTATUM Lindl. in Paxt. Fl. Gard. vol. I. Nr. 2. L. F. p. 55:

Odontoglossum phyllochilum Morren in Annal. Gand. t. 27.

Odontoglossum hastatum Batem. Orch. Mex. t. 20.

(A.) *flavescens*. Lip straw-colour.

(B.) *atratum*. Lip claret-colour.

Lip always hastate, with the basal lobes white and quadrate. The middle lobe of the crest is so rudimentary, that it may easily escape observation. The crest consists of two parallel principal keels, a point between them, and a short accessory keel on either side at the base.

Wild in Mexico; Oaxaca at 4000 ft.—Galeotti 5085; Mechoacan—Ghiesbreght.

Huc: B. Reg. XXXI. 1845. Misc. 60:

Pseudobulbis oblongis ancipitibus diphyllis, foliis ligulatis basi conduplicatis, racemo elongato paniculato, sepalis petalisque conformibus herbaceis lanceolatis acuminatis, labelli hastati lobis lateralibus truncatis, intermedio ovato acuminato, cristae lamellis 4 parallelis, columnae auriculis truncatis. Mexico.

A plant with the habit of Oncidium leucochilum. The flowers are greenish with red blotches, except the lip, which is white with a purple stain at the base.

Lindl. Paxt. Fl. G. I. p. 10. in „N. Granada."

Huc: *Cyrtochilum Juergensenianum* Lem. Jard. Fl. tab. 308:

Pseudobulbis ovato-oblongis compressis, folio solitario lineari-oblongo apice acuto basi plicato subattenuato coriaceo; scapo flexuoso 8-floro (v. amplius), folio multo longiore segmentis lato-subacuminatis apice subrecurvis luteo-viridibus brunneo ad medium late maculatis, deinde eodem tenuissime punctulatis; labello anguste hastato albido et roseo, lobis auriculiformibus rotundatis, toto tenuissime rubro punctulatis, lamellis elevatis apice truncatis, gynostemate late marginato, lobis rotundatis, albo basi luteo, anthera integra ovata. (Lem. ex bona icone).

Cyrtochilum Juergensenianum Lem. sub. pr. tab. An Odontoglossi spec. (O. Jurg.)? An potius etiam Oncidii sp. (O. Jurg.)? Patria: Mexico prov. Chinantla quo in loco supra truncos quercinos scandens.

193. ONCIDIUM OCHMATOCHILUM Rchb. fil. in Bot. Ztg. 1852. p. 698. L. F. 55:

This is described with olive-green flowers, flecked with golden. Lip white, with brown and violet flecks and bands. Its affinity is undoubtedly with O. phymatochilum; but its lateral sepals are connate at the base, and its petals are three times as wide; on which account it would rather seem referable to the Tetrapetalous macropetalous group (see p. 17). My specimen, for which I am indebted to Prof. G. Reichenbach, is a portion of a long zigzag panicle, the bracts of which are almost obsolete. The flowers are much smaller than in O. phymatochilum, and apparently of a firmer texture. The lateral sepals are linear-lanceolate, canaliculate, united for about a quarter their length, and longer than the other parts. The dorsal sepal and petals are alike lanceolate acuminate and recurved as well as channelled at the end; but the latter are at least twice as wide. The lip is hastate with the lateral lobes rounded, passing into an inversely cuneate isthmus which expands into an ovate lobe, much narrower than the base. The crest consists of six thick short plates, the middle basal one of which has a slightly elevated crest. The column has a pair of very prominent narrow cheeks; its wings are reduced to a pair of pointed rudiments opposite the base of the stigmatic cavity.' It would seem to be a very pretty plant when fresh.

Wild in Veragua; Chiriqui—Warscewicz.

Rchb. l. c.:

Panicula flexuosa, diffusissima, perigonii phyllo summo ligulato, acuto, ph. lateralibus externis subaequalibus, acuminatis, basi ima unguiculato connatis, illo tertia parte longioribus, ph. lateralibus internis oblongis acuminatis, prope triplo latioribus, supremo aequilongis, apice recurvis, labello basi lato, marginibus posticis rectis, utrinque auriculato, dein sensim angustius cuneato, antice in laminam reniformem, acutam apice recurvam dilatato, callo basilari erectiusculo, dorso carinato, utrinque biauriculato, gynostemii gracilis utrinque pone foveam angustissime alati alis subintegris, infra utrinque minute auriculato.

Blüthen olivengrün und gelb gefleckt. „Lippe weiss, mit braunen und violetten Flecken und Bändern." Das verwandte *O. phymatochilum* Lindl. hat dreieckige, oben spitze, grosse Flügel. O. nigratum hat gleichlange Hüllblätter. O. trulliferum dazu eine vielbucklige Lippe.

194. ONCIDIUM RANIFERUM Lindl. in B. R. sub t. 1920. 1838. t. 48. B. M. t. 3712. L. F. p. 55:

The flowers are too diminutive to render this useful to cultivators; they are wholly yellow, except the crest and base of the lip, which are reddish-brown. Sometimes the panicle becomes leafy, with a few scattered flowers only at the end of its branches.

Wild in Brazil; Organ mountains—Gardner 637.

10. LOCKHARTIA GOYAZENSIS Rchb. fil. in v. Schl. B. Z. 18552. 768:

Lobo medio quadrilobo, lobis lateralibus magis anticis; lobis mediis angustioribus, tepalis ovatis, alis angulatis superne denticulatis.

Xenia Tab. 39. II. u. p. 102:

Caulis spithamaeus; erectus. Folia ensiformia obtusata, producta, subpollicaria. Pedunculus axillaris abbreviatus, ramosulus. Bracteae oblongae acutae membranaceae nervo dorsali valde carinatae. Flores illis Lockhartiae acutae Rchb. fil. aequales. Sepala et tepala oblongo cuneata acuta, tepala magis flabellata subretusa. Labelli lobi postici lineari falcati divaricati, portio antica quadrilobata; lobuli laterales obtusanguli antici, lobus medius sinubus parvis distinctus emarginatus aequilatus linea triangula angulo antrorsa in basi, papulae plurimae per discum. Gynostemii alae obovatae superne retusae denticulatae.

Goyaz Gardner 4360!

Xen. I. p. 101: Species obscurissima et ob florum defectum non recognoscenda, igitur delenda:

Fernandezia longifolia Lindl. Orch. Lindl. p. 13:

Foliis lanceolatis acuminatis, elongatis, corymbo paucifloro sessili contracto longioribus.

A yellow flowered epiphyte from the neighbourhood of Venezuela in the province of Merida, at the height of 5000'. Jul. 1842. (N. 660.) Flower structure unknown to me."

Habemus iconem in horto Lindeniano confectam Lockhartiae cujusdam venezolanae „*Fernandezia longifolia* Lindl." dictae, quae fursan eadem est, cujus iconem transmisit dom. Lansberg; distat inflorescentiis folia excedentibus.

„*Fernandezia obtusa* Lindl." in Catal. — quid?

1462. PACHYPHYLLUM *H. B. Kth.*

Nov. Gen. et Sp. I. 339.

1. PACHYPHYLLUM DISTICHUM Hb. B. Kth. Rchb. fil. in Bonpl. III. 219:

Aff. P. Hartwegii, vaginis vernixiis transverse rugulosis, nervis non prominulis, foliis oblongis acutis microscopice denticulatis, tepalis lanceolatis acutis, labello oblongoligulato acuto utrinque obtusangulo, callo apice bilobo in disco inter utrumque lobum.

2. PACHYPHYLLUM HARTWEGII Rchb. fil. in Bonpl. III. 219:

Aff. P. disticho: vaginis nervosis opacis, foliis ovatis acutis margine microscopice denticulatis, tepalis ligulatis apice obtusato acutis, labello ligulato medio bipapulato.

Pachyphyllum distichum Lindl. Pl. Hartweg. nec Hb. B. Kth.!

Quito. Hartweg! Cf. Xenia Orchidacea.

3. PACHYPHYLLUM SERRA Rchb. fil. in Bonpl. III. 219:

Vaginis vernixiis nervosis et transverse rugulosis, margine laevibus, foliis oblongis acutis complicatis margine minutissime crenulatis, tepalis cuneatoligulatis acutis, labello pandurato ligulato acuto, carinis 2 apice praeruptis elongatis utrinque in medio labello.

Peru: Chachapoyas, Matthews.

4. PACHYPHYLLUM CRYSTALLINUM Lindl. in Pl. Hartweg. p. 18. 1846:

Foliis parvis squarrosis, floribus minimis fasciculatis crystallinis, sepalis carinatis obtusis, petalis oblongis acutis serrulatis, labello anguste rhombeo laevi medio bituberculato.

„On scrubby trees of the Paramo de la Tulata, in the prov. of Merida, at the height of 10000'. Aug. Flowers yellowish". (V. 6 86. Inconsp. near P. parvifolium) Rchb. fil. Bonpl. II. 15: Caracas 4000'. April. Wagner.

5. PACHYPHYLLUM PARVIFOLIUM Lindl. Hook. p. II. 1887. CVII:

Foliis ovalibus planis, spicis subaequalibus, labello mutico.

Chachapoyas, Peru. Matthews 1836.

Hitherto only one species of this genus has been described, the P. distichum of the Hmb. and Knth. Nov. Gen. et Sp. n. 1. t. 77., an inhabitant of Loxa and Gonzana in Peru. From that our plant is abundantly distinguished by its much slenderer stems, smaller and by no means falcate leaves, by the few (apparently constantly) 3-flowered spikes. The sepals are singularly (fig. 4!) grooved and carinated, the labellum (scarcely differing in form from the petals) is destitute of tubercles, which have been considered an essential character of the genus; but Prof. Lindley doubts whether those represented by Humboldt are not so done by mistake.

6. PACHYPHYLLUM SQUARROSUM Lindl. in Taylor Ann. and Mag. of Nat. Hist. Vol. XV. N. 96. Febr. 1845. p. 107:

Foliis recurvis squarrosis, labello obsolete trilobo callo a marginibus longe distante.

Popayan. (Hartweg).

Much like P. distichum, except in the leaves and the form and callosity of the labellum.

1463. DICHAEA *Lindl.*

Gen. et Sp. Orch. p. 208.

1. DICHAEA GRAMINOIDES Lindl. Orch. p. 209. Rchb. fil. Bonpl. II. 15. Caracas. Wagener. Bonpl. III. 67: Ocanna. 2000'. Wagener.

2. DICHAEA SQUARROSA Lindl. in Ann. Nat. Hist. 1840. IV. p. 384:

Foliis linearibus squarroso-recurvis, floribus subterminalibus, labello cymbiformi sessili apiculato, columna glabra antice unidentata.

Mexico, Hartweg.

Flowers large for the genus, apparently white. — Lindl. In Benth. Hartw. 72: in montibus Tuquila Mexici Hartweg.

3. DICHAEA OCHRACEA Lindl. B. Reg. XXV. 1839. Misc. 71:

Foliis linearibns acutis carinatis, pedunculis foliorum fere longitudine, bractea cucullata ovarii longitudine, sepalis petalisque oblongis acutis, labello subrotundo rhomboideo sessili, columna pilosa, clinandrio membranaceo-marginato, anthera bigibbosa.

A small Demerara plant, with narrow leaves, and pale yellow ochre-coloured flowers. It is next D. graminoides, which differs in having smaller flowers with very short peduncles and both shorter and flatter leaves. Mssrs. Loddiges obtained it from Demerara.

4. DICHAEA GLAUCA Lindl. Orch. 209. Bot. Reg. XXX. 1844. Misc. 67:

This the finest of the genus, delightfully sweetscented, flowered with Mssrs. Loddiges: he received it from Oaxaca, where as in other parts of Mexico, it is common. The leaves, which are placed in two rows, in an imbricated manner, are quite blue with bloom on the underside. The flowers are pure white, except a spot of yellow at the very base of each division. — Lindl. in Pl. Hartw. 72: in montibus inter Villa alta et Betecza Mexici Hartweg!

5. DICHAEA OERSTEDII Rchb. fil. Bonpl. III. 219:

Aff. D. glaucae Lindl. foliis brevioribus (sesquipollicaribus) latioribus, labelli bene unguiculati lamina oblonga utrinque ter sinuata.

Caules adsunt ultrapedales. Folia praesertim vaginas subcoeruleo pruinosas offerentia ligulatooblonga apice obtusata cum apiculo. Flores numerosi — nobis tantum ex icone Oerstediana noti. Sepala triangulolanceolata subacuta. Tepala breviora latiora. In summo monte El Viego. Oersted.

1466. ODONTOGLOSSUM *H. B. K.*

Nov. Gen. et Sp. I. 351. L. O. p. 211.

Lindl. Fol. Odontoglossum haec:

Sepala explanata, libera; lateralibus nunc basi connatis, nunc unguiculatis elongatis. Petala subaequalia, nunc paulo teneriora. Labellum basi cum columna parallelum eique medio adnatum, limbo deflexo, basi varie cristatum rarissime nudum. Columna clavata, saepius elongata, basi angusta nunc in membranam utrinque expansa, apice auriculata aut aptera. Stigma fovea circularis. Pollinia 2, pyriformia, solida aut postice excavata; caudicula lineari; glandula ovali. Herbae epiphytae et terrestres, Mexicanae, Peruvianae et Novogranatenses, pseudobulbosae. Folia coriacea v. papyracea. Racemi radicales 1-100-flori, aut paniculae, saepe speciosissimae.

A genus allied to Oncidium from which it is chiefly distinguishable by its column being long, and usually narrow at the base, or at all events not tumid there and by the base of the lip being always parallel with the face of the column. No other difference has yet been observed; but it may be added, that the lateral sepals are very rarely united. The two genera unite by Od. naevium, which is very like Oncidium phymatochilum, and by Od. costatum and its allies, which run into the Oncidia microchila. The crest is extremely variable in its composition, but it usually consists of a pair of parallel lamellae, between which arise various tumours and plates, the central one of which always really occupies the axis of the lip. In some instances, however, especially among the Trymenia, little or no trace is discoverable of that mode of arrangement.

Analysis of the sections.

Clinandrium nudum.
  Columna cirrhata . . . . §. 1. *Euodontoglossum.*
  Columna auriculata aut aptera.
    Labellum manifeste unguiculatum, luteum . . . . §. 2. *Xanthoglossum.*
      „ album aut roseum . . . . §. 3. *Leucoglossum.*
    Labellum sessile.
      Sepala lateralia parallela elongata unguiculata . . . . §. 4. *Myanthium.*
        a. Labellum cordatum in apicem longum productum.
        b. „ oblongum vel basi angustatum.
      Sepala radiantia subaequalia; lateralibus sessilibus aut parum unguiculatis . . . . §. 5. *Isanthium.*
        a. Sepala et petala sub anthesi longe distantia.
        b. „ „ imbricata.
Clinandrium cucullatum, margine membranaceo . . . . §. 6. *Trymenium.*

§. 1. *Euodontoglossum* Lindl. F. l. c. p. 2:

Columna apice alis longis acuminatis erectis aut cirrhosis instructa.

This, the original form of the genus, is readily known by the attenuation of the column-ears, which are never rounded and broad, but invariably tapered into a narrow point, which is often extended into a bristle-like appendage.

1. ODONTOGLOSSUM LINDLEYANUM Rchb. fil. Wrswz. Bonpl. II. 99:

Aff. O. constricto Lindl. labello linearilanceo utroque latere angulato in disco bifalcigero, basi per carinam cum gynostemio connato.

Pseudobulbi obovati compressi, folia linearilanceolata acuta pedunculos haud aequantia, pedunculi gracilenti, longiuscule articulati, apice flexuosi, racemus 3—12 florus, bracteae oblongae acutae apiculatae scariosae ovaria pedicellata dimidio seu tertia parte aequantes. Flores stellati, sepala a basi anguste cuneata linearilanceolata acutoacuminata, tepala paulo latiora, sublongiora, labellum linearilanceolatum ante medium trilobum, lobi laterales obtusanguli, lobus medius anguste linearilanceus, productus; pars tertia infima carina interposita cum gynostemio connata (more Trichopiliae); anteposita linea callosa sulcata in basi lobi medii in cornicula ancipitia ligulata retusa, ascendentia excurrens; gynostemium gracile velutinum; auriculae erectae lanceofalcatae juxta antheram conicam, vertice gibberosam antice rostratam. Blüthen goldgelb mit Purpurflecken, wenig kleiner, aber in allen Theilen schmäler, als die des *Odontoglossum epidendroides* Hb. Kth. Die Lippe weiss mit Purpur und gelber Spitze. — Der eine von uns hielt das *Odontoglossum epidendroides* Lindl. (nicht Hb. Kth.: dieses hat halbrunde häutige, nach vorn gerichtete Oehrchen) für das O. Schillerianum. Jenes passt aber noch besser auf diese Art. Neu-Granada. 3—6000. v. Warscewicz.

Huc: *Odontoglossum epidendroides* Lindl. Fol. l. c. N. 1. (non Hb. Kth. N. G.):

Pseudobulbis ovato oblongis compressis, foliis lanceolatis subcoriaceis, scapo racemoso multifloro, sepalis petalisque lineari-lanceolatis acuminatis, labello angusto unguiculato hastato acuminato basi bicorni, columna tomentosa, auriculis erectis angustis acuminatis.

Damp forests of Pamplona, at the height of 8500 feet: November—Linden, 1261.

Flowers large, yellow, scentless, with broad brown blotches, according to Humboldt and Bonpland. The plant from Mr. Linden, which I suppose to be the same as *this*, is described by that traveller as having pseudobulbs small, oval, leaves strait, lanceolate; stem twelve to sixteen inches long; flowers fragrant; sepals linear, golden-yellow, spotted with purple; lip white, spotted with purple. The column is very downy; and the claw of the labellum is united half way to the face of the column.

Rchb. fil. Bonpl. II. 278: Ocanna: Wälder bis 9000′. N. 1162. Schlim. Rchb. fil. Bonpl. III. 66: b. majus: flore duplo majore. Ocanna. Wagener.

2. ODONTOGLOSSUM CONSTRICTUM Lindl. in Bot. Reg. 1843, Misc. 25. L. F. l. c. n. 2:

Foliis lineari-lanceolatis pergameneis basi valde angustatis, panicula laxa racemosa, sepalis petalisque lineari-lanceolatis acuminatis, labello medio constricto; hypochilio oblongo, epichilio subpandurato cuspidato serrato basi lamellis 2 serratis aucto, columna bicirrhosa.

(B.) *majus*. Flowers larger. Epichil hastate.

Wild in La Guayra, gardens: B. in the Caraccas; April 1842—Linden, 623.

A much more slender plant than the last, without the long horns at the base of the lamina of the lip. Flowers yellow, spotted with brown, except the lip which is white stained with violet.

Rchb. fil. Bonpl. II. 12. Caracas. Wagener.

3. ODONTOGLOSSUM NAEVIUM Lindl. in Paxtons Fl. Gard. I. t. 18. F. l. c. N. 3:

Pseudobulbis costatis, foliis tenuibus lanceolatis basi angustatis, panicula diffusa, sepalis petalisque angustis ovato-lanceolatis acuminatis un-

dulatis, labello subconformi pubescente vix hastato; cristae dentibus 2 grossis subtrilobis pubescentibus, columnae cirrhis subulatis patulis.

B. *majus*. Flowers much larger. Lip not hastate, but rounded at the base, very slightly serrate. Spots much more rose-coloured.

Wild in Demerara—Schomburgk; Venezuela—Funck and Schlim, 721: in the province of Truxillo, near S. Lazaro and La Penna, at the height of 6000 feet, flowering in August; B. New-Granada, in the province of Pamplona, at the height of 8000 feet—Linden, 146.

Flowers white, spotted with purple or rose-colour; according to Funck and Schlim the lip of this plant is yellow, a circumstance due perhaps to the fading of the flowers. Very much like Oncid. phymatochilum, which is however a true Oncid.

Rchb. fil. Bonpl. II. 278. S. Marta 5—6000'. Schlim 1202. Bonpl. III. 66. Ocanna 4000'. Wagener. — Walp. Ann. III. p. 560.

4. ODONTOGLOSSUM ODORATUM Lindl. in Orch. Linden., N. 86. L. F. Nr. 4:

Foliis anguste ensiformibus pergameneis, panicula amplissima, labello hastato lobis lateralibus rotundatis intermedio acuminato apice subundulato pubescente disco bidentato, columnae pubescentis cirrhis duobus runcinatis setaceis duobus minimis recurvis.

Wild in Venezuela; in the damp and gloomy forests of the Sierra Nevada, of Merida, at a height of 5000 to 7000 feet; June, August—Linden, 623.

Pseudobulbs oval, acute, ribbed; leaves lanceolate; flowers numerous, sweet-scented. Sepals golden-yellow, spotted with red. Lip white, purple at the base, according to Linden. The difference in the form of the lip, as well as in the colour of the sepals, makes it easy to distinguish this from O. naevium. The appearance of the plant when dried is very much like that of O. pardinum.

Rchb. fil. in Bonpl. II. 12. Merida. December. 6000'. Dazu eine kleine verkümmerte Form mit wenigblüthiger Traube, welche auch Herr Moritz sammelte. Caracas. Wagener.

5. ODONTOGLOSSUM GLORIOSUM Lind., Rchb. fil. Rchb. fil. Bonpl. II. 278:

Aff. Odontoglosso naevio Lindl., paniculatum, labello margine plano nec crispulo, antrorsum valde attenuato, carina in ima basi praerupta exeunte in callum quadrigeminum, dentibus acutis ascendentibus velutinis, nec antrorsis rhombeis serratis, gynostemio gracili longiori. (Odontoglossum naevium majus Hort. Lind. verosimiliter Lindl.)

Panicula effusa ampla. Flores illis Odontoglossi naevii multo (duplo) majores; candidi, carmineo-purpureo guttati. Sepala ac tepala lanceolata acuta, paulisper undulata. Labellum ligulatum, basi rotundatum, ante basin utrinque bidentatum. Gynostemium gracile, medio valide angulatum, apice utrinque erecto acuminatoque auriculatum. — Steht zwischen *Od. naevium* Lindl. und *praestans* Rchb. fil., Wscwz.; letzteres hat eine Lippe, welche viel kürzer, als tepala, völlig verschiedene Schwielen der Säule und breitere Oehrchen. — Neu-Granada: Provinz Soto in Eichenwäldern. 8—9000'. Nr. 406. Schlim. — L. c. III. 66: Ocanna. 6000'. Wagener.

6. ONCIDIUM SCHLIMII Lind., Rchb. fil. Bonpl. II. 278:

Aff. O. epidendroidi Hb. B. Kth., sepalis petalisque integerrimis, labello pandurato acuto denticulato; carinis apice falcatis radiantibus in basi 5—7; alis gynostemii rhombeis apice laceris.

Folium oblongolanceolatum acutum. Pedunculus ultrapedalis, rariflorus, superne flexuosus, bracteae ovatae acutae tertiam ad quintam ovarii pedicellati aequantes, sepala oblonga acuta basi cuneata, tepala basi paulo latiora, labelli unguis linearis laminae 5. vel 6. partem aequans bicarinatus, lamina plicata refracta, margine minute denticulata, pandurata, triloba, lobi postici rotundati, sinu obtuse triangulo a lobo medio sejuncto, lobus medius postice hastatus, ceterum rotundatus, apice apiculatus

lamellae 2 a basi usque ad ortum lobi medii, carnoso falcatae, apice subulatae, interjecta carinula brevior, utrinque superadditae 3 carinulae brevissimae, extrorsae; denticulus falcatus a carinis liber utrinque in disco; gynostemium curvum, apice dilatatum, androclinium postice angulatum, alae quadratae retusae, saepius 2—3-fidae; sinus inter alas summas ac basilares anguste exciso semilunatus duas quintas partes longitudinis gynostemii occupans, anthera galeata, apice tridentata, dente medio longiori. — Ocanna. Januar 7000—8000'. Nr. 403. Schlim. — Bonpl. III. 66. Ocanna. Wagener.

7. ODONTOGLOSSUM PRAESTANS Rchb. fil. v. Wwcz. Bonpl. II. 99:

Aff. O. naevio Lindl. labelli lobo medio laevi, cristis in basi 4 carinaeformibus, rhombeis, externis 2—3-dentatis, mediis productis 4—6-dentatis.

Folia linearilanceolata acuta. „Paniculata macroclada", rami densiflori (—15), bracteae lanceolatae acutae ovaria dimidio aequantes, sepala ac tepala linearilancea acuminata, labellum trilobum, angustum, lobi laterales erecti cartilaginei abbreviati rotundati dense sericeo puberuli, lobus medius refractus oblongolanceus basi utrinque semicordatus omnino laevis, cristae inter lobos laterales 4 cariniformes, rhombeae, externae superne 2—3dentatae, mediae paulo anteriores, 4—6-dentatae; gynostemium erectum, androclinium postice triangulo elevatum, alae apicilares porrectae falcatae nunc runcinatae, dens productus parvus utrinque in medio gynostemii angulo. Nächst O. naevium, dem es an Grösse gleichkommt, allein durch die Leisten auf Lippe und durch ganz glatte Mittellappen ohne Sammt leicht zu unterscheiden. Blüthen gelb, purpurfleckig. v. Warscewicz.

Bonpl. III. 66: Ocanna. Wagener! L. c. 226: „Hallii" hort. Rollisson.

8. ODONTOGLOSSUM SCHILLERIANUM Rchb. fil. in Bonpl. II. 12:

Racemo quinquefloro, grandifloro, bracteis squamatis parvis, sepalis tepalisque oblongis acutis expansis, labelli ungue angusto complicato, erecto, lamina cordato triangula acuta patula basi bicarinata, carinis divergentibus, gynostemio apice biauriculato, auriculis linearibus acutis erectis.

Eine wunderschöne Art, Herrn Consul Schiller gewidmet. Trugknollen länglich, klein, Stützblätter mit länglichen, spitzen Platten. Oberes Blatt länger (1 Fuss lang), am Grunde sehr verschmälert. Der oben zickzackige Blüthenstiel über fusshoch trägt fünf Blüthen von der Grösse derer des *Od. nobile* Rchb. fil. Aeusserlich sind die fünf Hüllblätter mattgelb mit röthlich angehauchten Flecken. Innerlich dagegen prangen sie in der Farbe des reinsten Goldes und zahlreiche Purpurflecken sind über sie ausgegossen. Die Lippe ist am Grunde schneeweiss, um die zwei Kiele stehen ein paar Purpurflecken, vor ihnen theilt sie sich in eine mittlere violette und eine vordere goldgelbe Zone. Die Säule ist weiss, mit einigen rothen Fleckchen. Wahrscheinlich fällt diese Art mit *Odontogl. epidendroides* „Humb. Kunth." Lindl. Folia Odontoglossum Nr. 1. zusammen. Ein Blick auf die citirte Tafel beweisst, dass Humboldt's Pflanze durch runde seitliche Oerchen himmelweit verschieden ist — eine Blüthe im Berliner Herbar bezeugt die Richtigkeit der Abbildung.

Rchb. fil. Xen. I Tab. 22. I. pag 58.

9. ODONTOGLOSSUM CIRRHOSUM Lindl. Orch. p. 211. N. 2. L. F. N. 5:

Sepalis lanceolatis petalisque latioribus undulatis acuminatissimis maculatis labello longioribus, labelli unguiculati lamina cordata acuminatissima basi cornubus duobus longis porrectis instructa, columna apice bicirrhosa.

Wild in Guayaquil; in the valley of Mindo, at the height of 6000 feet—Colonel Hall. Nothing more is known of this plant than could be gathered from the examination of a few dried flowers. They appear to be yellow, with some broad purplish blotches.

10. ODONTOGLOSSUM HALLII Lindl. Bot. Reg. t. 1992. L. F. Nr. 6:

Pseudobulbis ovatis acuminatis ancipitibus, foliis ensiformibus in basin angustatis, scapo paniculato, sepalis petalisque ovato-lanceolatis acuminatis unguiculatis, labello oblongo acuminato lacero, crista baseos lamellata multifida, columnae alis bidentatis dente superiore aristato.

Wild in Peru; in the woods of Guayaz on the western declivity of Pichincha—Hartweg: on trees in the valley of Llon, at the height of 8000 feet—Colonel Hall; in New-Granada, in the forests of Pamplona, at the height of 8500 feet; November—Linden 1263.

A most beautiful species. Petals yellow, spotted with purple; lip white. — Linden. Flowers three inches and a half in diameter.

11. ODONTOGLOSSUM LUTEOPURPUREUM Lindl. Orch. Linden. Nr. 85. L. F. Nr. 7:

Foliis ensiformibus basi longe angustatis, floribus racemosis, bracteis ovatis squamaeformibus, labello obovato quadrilobo fimbriato lamellis quinque laceris pubescentibus, columna pubescente alis in cirrhos numerosos longos solutis.

Wild in Neu-Granada; in the thick forests of Quindiu, at the height of 8000 feet; February—Linden, 1284.

Leaves two feet long. Flowers three inches in diameter and more. Pseudobulbs oval thick „ two or three inches long. Stem a yard high. Flowers large (like those of O. Hallii); petals bright yellow, spotted with purple; lip yellowish white, spotted with rose. A magnificent species.

12. ODONTOGLOSSUM INSLEAYI Lindl. Fol. Nr. 8:

Pseudobulbis ovatis compressis diphyllis, foliis coriaceis oblongo-ensiformibus subundulatis apice recurvis racemo paucifloro erecto rigido brevioribus, sepalis petalisque oblongis subaequalibus undulatis infimis basi connatis, labello angusto obovato retuso basi auriculato, disci crista apice biloba dilatata utrinque in medio dente refracto aucta, columnae alis incurvis cirrhatis.

Oncidium Insleayi Barker in Bot. Reg. 1840, misc. 21. Bateman Orch. Mex. t. 21. Van Houtte, Flore des Serres, 1848. t. 62.

(B.) *macranthum*. Flowers twice as large, thinner, and much paler, without the rich red spots on the lip.

Wild in Mexico—Barker; Oaxaca—Loddiges.

Flowers two and half to three inches in diameter, yellowish, spotted with rich brown; the lip brighter yellow, spotted with red, chiefly round the edge. This plant has much the habit of O. grande, from which it differs in the form of the lip, and in the column being furnished with red subulate horns curved forwards instead of having a pair of broad rounded membranous ears. The slight union of the lateral sepals occurs also in a few other species.

§. 2. *Xanthoglossum* L. F. p. 4:

Columna auriculata vel aptera. Labellum ungue longo lineari (saepius bilamellato) instructum semper luteum.

With this section the attenuated or cirrhose condition of the auricles of the column disappears, not to recur through the remainder of the genus. O. grande is notoriously very near O. Insleayi, and the two connect the sections Euodontoglossum and Xanthoglossum. The present and following sections are well marked by the long narrow unguis of the lip, beyond which the limb suddenly expands into a thin plate.

12. ODONTOGLOSSUM GRANDE Lindl. in B. R. 1840. Misc. Nr. 94. Bat. Orch. Mex. Guat. t. 24. Morren Ann. Gand., I. t. 37. Bot. Mag. t. 35. Lindl. Fol. Nr. 9:

Sepalis lanceolatis lateralibus convexis falcatis petalisque oblongis obtusiusculis latioribus subundulatis, labello subrotundo basi auriculato

sepalis plus duplo breviore: disci crista apice truncata bituberculata utrinque in medio dente calloque aucta, columnae tomentosae auriculis rotundatis convexis incurvis.

Wild in the cooler parts of Guatemala—Skinner, Hartweg.

The dried flowers measure six inches and a half from the tip of the petals, and the fresh ones are even larger. They are yellow, almost covered with cinnamon-brown bands and blotches. The auricles at the base of the lip turn their posterior edges down and inwards till they meet beneath the unguis and there grow together. Two to five flowers grow together on a scape, which is seldom more than five or six inches long. This noble species, now so common in gardens, has been found by Mr. Trevor Clarke to live in health and to flower in the open air in England under the shade of the laurel, during the summer. Mr. Skinner states that in its native country it lives in a climate the extreme temperatures of which are sixty and seventy degrees, and prefers damp shade.

Obs. *Odontoglossum tigrinum* L. F. Nr. 10. cf. *Oncid. tigrinum* Lex. supra p. 791.

14. **ODONTOGLOSSUM MACULATUM** Llave Orch. Mex. 2. 35. B. R. 1840. t. 30. L. F. 11:

Pseudobulbis oblongis compressis monophyllis, foliis oblongis nervosis acutiusculis racemis pendulis multifloris brevioribus, bracteis navicularibus herbaceis ovario brevioribus, sepalis lineari-lanceolatis acuminatis discoloribus, petalis oblongis undulatis acuminatis, labello cordato acuminato subcrenato; appendice unguis bivalvi concava cochleari apice libera bidentata per medium argute serrulata, columna pubescente subaptera.

Wild in Mexico—Barker, Karwinski.

Sepals chesnut-brown. Petals and lip clear yellow, spotted with brown. Differs from O. cordatum chiefly in the petals being broader than the sepals and much more acuminate, the racemes drooping, not stiff and erect, the lower bracts about half as long, and the upper quite as long as the ovary, and in the want of a double tooth which, in O. cordatum standing at the very base of the stalk of the lip, presses itself against the foot of the column.

Pescatorea t. 28.

15. **ODONTOGLOSSUM CORDATUM** Lindl. in Bot. Reg. 1838. Misc. 90. Knowles and Westcott, Floral Cabinet t. 100. L. F. N. 12:

Pseudobulbis oblongis compressis diphyllis, foliis latooblongis planis acutis scapo squamis carinatis vaginato brevioribus, racemo stricto distichο, bracteis navicularibus acuminatis membranaceis ovario multo brevioribus, sepalis petalisque lineari-lanceolatis acuminatissimis, labello cordato acuminatissimo integerrimo appendice unguis carnosa apice biloba basi utrinque dente unico aucta, columna pubescente clavata subaptera.

Wild in Mexico—Barker; in Guatemala—Hartweg: on the Cumbre of Choacas.

Sepals and petals richly blotched with brown upon a yellowish green ground. Lip white, with the crest at the base purplish, and the apex spotted and blotched with rich brown.

Pescatorea t. 26. — Hook. B. M. 4878. (sub O. maculato).

Obs. *Odontoglossum umbrosum* Rchb. L. F. Nr. 13. cf. *Oncid. linguiforme* Lindl.

16. **ODONTOGLOSSUM MYSTACINUM** Rchb. fil. v. Schl. B. Z. 1852. et L. F. Nr. 14:

Pseudobulbis ovalibus compressis corrugatis monophyllis basi polyphyllis, foliis ligulatis acutis planiusculis carinatis scapo gracili subramoso multo brevioribus, bracteis herbaceis lanceolatis, pedunculis duplo brevioribus, sepalis petalisque ovatis acuminatis, labello unguiculato

cordato obovato subrepando plano apice reflexo medio pubescente ungue obsolete lamellato, columnae alis multifidis.

Cyrtochilum mystacinum Lindl. in B. R. 1838, Misc. 38. 1839, t. 62.

Wild in Peru—R. Harrison.

A slender plant, with distant yellow whole-coloured flowers the size of O. Bictoniense.

17. ODONTOGLOSSUM CARINIFERUM Rchb. fil. in B Z. 1852. p. 638. L, F. Nr. 14:

O. paniculatum, sepalis petalisque oblongis acutiusculis basi subcuneatis dorso carina crassa auctis pergameneis, labello sessili ligulato dimidio anteriore subito in laminam reniformem denticulatam medio antice apiculatam extenso membranaceo, lamellis rhombeis extrorsum tri-quadridentatis supinis utrinque in ligula labelli basilari, raphi utriusque lamellae carinata antrorsum in tres digitos excurrente, columna elongata alis elongatis crenulatis hyalinis inferioribus 3 utrinque obtusatis, crassioribus, clinandrio vix marginato. — Rchb.

Wild in Central-America—Rchb.

Panicle zigzac branches. Bracts triangular, short. Flowers yellowish green, stained with olive-brown. Lip whitish yellow, with purple crests. No other species hitherto known has carinate sepals and petals. — Rchb. Described by Mr. Reichenbach from fresh specimens cultivated in Germany.

18. ONCIDIUM BICOLOR Lindl. in Benth. Pl. Hartw., Jan. 1845. B. R. 1845. Misc. p. 59. L, F. Nr. 16:

O. foliis lanceolatis scapo simplici paucifloro flexuoso subaequalibus, sepalis petalisque ovatis acutis subundulatis aequalibus, labello unguiculato obovato apiculato basi cuneato, denticulis quibusdam (sex) in unguem, columnae brevis alis linearibus decurvis serratis.

Wild in Peru—Ruiz and Pavon.

Only known from a drawing in Sir W. Hooker's Herbarium, copied by Mathews from the figures of Peruvian plants left at Lima by Ruiz and Pavon, Nr. 112. The flowers are large, bright violet, with a great whole coloured yellow lip. It would appear from the figure that each edge of the unguis is occupied by three strong equal curved teeth, which meet at the point of the unguis.

19. ODONTOGLOSSUM TRIPUDIANS Rchb. fil. Warscewcz. Bonpl. II. 100:

Aff. O. rigido sepalis tepalisque subaequalibus, sepalis lateralibus margine inferiori unidentatis, labelli ungue brevissimo, lamina pandurata bicarinata, carinis contiguis apice divaricatis, papulis filiformibus utrinque in basi liberis, alis rhombeis trifidis.

Racemus elongatus, pluriflorus, bracteae triangulae ovaria pedicellata brevia dimidium prope usque aequantes, tepala oblonga acuta basi cuneata, lateralia prope rhombea, utrinque medio angulata, angulo inferiori unidentigero, tepala subaequalia, labellum ab ungue brevissimo panduratum, angustum, lobi basilares obtuse angulati antrorsum angustati, lobus medius tertia brevior apicilaris reniformis acutus, lobulatus, denticulatus, crispus, carinae 2 a basi ad medium contiguae, ibi in carinas superne laceras divergentes, foveam sub se et inter se mittentes, carinulae apice filiformi liberae extrorsae utrinque in lobis lateralibus, gynostemium incurvum, limbi foveae stigmaticae magnae producti, androclinium membrana humili denticulata marginatum; alae antrorsae rhombeae trifidae, alae obtusangulae super imam labelli partem, anthera antice bene rostrata. Goldgelb mit braunrothen Flecken. Peru. v. Wswz.

20. ODONTOGLOSSUM RIGIDUM Lindl. in Benth. Pl. Hartw., p. 152. Bot. Reg. 1845. Misc. p. 58. L. F. Nr. 17:

O. foliis oblongis basi angustatis scapo paniculato contracto pyramidali brevioribus, sepalis lateralibus lineari-lanceolatis dorsali petalis-

que lanceolatis, labello unguiculato obovato cordato apiculato lineis duabus elevatis ex ungue in limbum divergentibus, columnae alis angustis decurvis.

Wild in Peru: heights of Chachapoyas—Mathews, 169; growing on the ground in the Cordillera, near Loxa—Hartweg.

Panicle stiff, erect, pyramidal, with short ascending zigzag branches clothed at the base with mucronate scales. Bracts ovate, concave, mucronate. Flowers yellow, whole-coloured, with a very long narrow stalk to the lip.

21. ODONTOGLOSSUM EPIDENDROIDES Hb. Kth. N. G. Sp. Pl. I. 351. t. 85. Rchb. fil. Bonpl. II. 99:

Pedunculus validus pedalis simplex racemosus, rariflorus, bracteae triangulae ovario multoties breviores, sepala oblongolancea acuta basi anguste cuneata, lateralia labello supposita, tepala latiora et latius cuneata, subfulcata, labellum gynostemio basi adnatum, unguis linearis arrectus per totam superficiem margine omisso bicarinatus, lamina refracta anguste elliptica, acutiuscula, minute lobulata, minutissime denticulata, ungue longior, callus a basi usque ante medium in dentes 2 ancipites acutissimos excurrens, interjecto denticulo multo breviori, superaddito utrinque callo dentiformi extrorso minuto; gynostemium gracilentum, semiteres, apice curvulodeclinatum, auriculae juxta foveam rotundatae, nunc bilobae minute denticulatae, alae a medio gynostemio basin usque pergameneae, sinu exciso ab alis superioribus sejunctae.

Rchb. fil. Xenia I. Tab. 22. II. 1. 2. p. 59.

22. ODONTOGLOSSUM SCEPTRUM Rchb. fil. Wrswz, Bonpl. II. 99:

Aff. O. triumphanti, carinis radiantibus in basi laminae labelli 12, gynostemii alis lobato laceris.

Pedunculus pedalis, racemosus, pluriflorus (8—9), bracteae lato triangulae quartam seu quintam ovarii pedicellati aequantes, sepala oblonga acuta basi cuneata, tepala rhombea acuminata, margine lacera, hinc inde semihastato dentata, lacera, crispa, labelli unguis brevissimus, lato linearis, laminae quintam vix aequans, lamina pandurata, refracta, lobi laterales obtusanguli margine denticu'ati, sinu minuto transeuntes in lobum medianum anticum prope duplo latiorem, transverso ovatum, apiculatum margine lobato denticulatum, carinis radiantibus in basi 12, mediis lateralibus productis, rhombeis, dorso laceris, antice apiculatis, gynostemii incurvi alis apicilaribus rhombeis lobatolaceris, lobis fissis, sinu semirotundo exciso alas inter et alas baseos mox in unguem medio adnatum labelli transeuntes. Blüthen etwas grösser als die des *O. luteopurpureum* Lindl. Sepala fast ganz braun; Lippe und Tepala hell, weisslichgelb mit Purpurflecken. Neu-Granada. v. Warscewicz.

23. ODONTOGLOSSUM TRIUMPHANS Rchb. fil. Bonpl. II. 99:

Aff. O. luteopurpureo tepalis erosis, labello basi bifalci, utrinque bicalloso, gynostemii alis rhombeis ascendentibus margine externo erosulis.

Folia oblonga lanceolata acuminata, basi attenuata, pedunculus elongatus, racemosus, internodia elongata, bracteae triangulae ovariis pedicellatis 4.—5. breviores, sepala oblonga acuta, basi bene angustata, tepala subaequalia, latiora, magis acuminata, utrinque hinc illinc lobulata, sinuato dentata (!), labelli unguis linearis laminae tertiam adaequans, disco bicarinatus, dimidio cum gynostemio connatus, lamina pandurata, apiculata, margine denticulata, paulo ante apicem unguis utrinque sub plica extrorsa refractum, carinae unguis excurrentes in dentes antrorsos falcatos tertiam laminae aequantes, interposita in sinu utriusque papula minutissima, papulae 2 majores extrorsae pone carinas, gynostemium semiteres apicem versus curvatum, alae pone foveam rhombeae minute denticulatae, sinu quadrato separatae ab alis inferioribus rectilineis basin usque progredientibus. Blüthen noch um $1/4$ grösser als bei Hallii, unter diesem Namen es in Gärten geht; auch jedenfalls das sogenannte O. Hallii in Orchideae Lindenianae. Neu-Granada. v. Warscewicz.

Rchb. fil. in Bonpl. II. 218:

Eine der stolzesten Arten dieser herrlichen Gattung. Nur O. grande hat grössere Blüthen. Ocanna. Wälder 7—8000′. Nr. 404. Schlim. Bonpl. III. 66. Ocanna. 6000′. Wagener. — Pescatorea t. 46.

24. ODONTOGLOSSUM SPECTATISSIMUM Lindl. Fol. Nr. 55:

Pseudobulbis ovatis monophyllis, foliis lanceolatis in petiolum canaliculatum angustatis scapo simplici stricto 3—4-floro aequalibus, bracteis ovatis brevibus membranaceis, sepalis petalisque lanceolatis acutissimis aequalibus, labelli basi angustati limbo ovato apiculato denticulato crista simplici antrorsum bicruri denticulo utrinque adjecto, columnae alis membranaceis denticulatis acutis.

Wild in Neu-Granada—Linden, 147.

Whole plant about a foot high. Flowers nearly three inches in diameter, strongly blotched with some very dark colour upon a pale ground. One of the finest species, with the sepals and petals so broad that it approaches nearly to the next division.

§. 3. *Leucoglossum* L. F. p. 8:

Columna auriculata vel aptera. Labellum ungue longo lineari (semper bilamellato) instructum, album aut purpureum.

These species have in general membranous delicate flowers, and never show the least tendency to produce a yellow colour in their lip. Yellow indeed is unknown among them except in the two plates that surmount the unguis of the lip.

25. ODONTOGLOSSUM STELLATUM Lindl. in B. R. 1841. Misc. 25. L. F. Nr. 18:

Pseudobulbo ovali compresso, folio solitario lanceolato recurvo, scapo subbifloro, bracteis ovarii triquetri medium haud attingentibus, sepalis petalisque aequalibus linearibus acuminatis herbaceis, labello rhomboideo subrotundo grosse dentato appendice unguis truncata quadridentata apice libera.

Wild in Mexico—Hartweg; Guatemala, on the Volcan del Fuego and Cuesta of Argueta—Skinner.

Of nearly the same size and habit as O. Rossii, from which it differs in the sepals and petals being equally herbaceous and narrow, of a dull olive green, faintly spotted or rather clouded with purple. It has a pure white lip.

Huc: *O. (Leucoglossum) erosum* Rchb. fil. v. Warscewz. Bonpl. II. 99:

Aff. O. rubescenti tepalis sepalisque aequalibus.

Pedunculus 2—3florus, a spatha ancipiti acuta membranacea fultus, bracteae membranaceae lanceolatae acutae ovariis pedicellatis sexies — decies breviores, sepala ac tĕpala linearia acuminata, lamella unguis oblonga excavata apice libero quadriloba, lobis mediis parvulis, lamina triangula, lateribus posticis paulo ascendentibus integris, limbo reliquo eroso lobulato; gynostemium gracile, apterum. Blüthe so gross, wie bei O. stellatum, Hülle und Lippe purpurn. Veraguas. v. Warscewicz.

Huc: *Odontoglossum erosum* A. Rich. Gal. in Ann. Sc. nat. Jan. 1845:

Pseudobulbo ovoideo oblongo 1-phyllo; fol. lanceolatis acutis; scapo 1-floro; sepalis luteis; labello lilacino late ovali margine eroso-denticulato. — Mexico.

26. ODONTOGLOSSUM EHRENBERGII Link, Klotzsch, and Otto, Ic. p. 38. t. 16. Paxton's Fl. Gard., III.; gleanings Nr. 496. Ic. 247. L. F. Nr. 19:

Pseudobulbis caespitosis globoso-subelongatis compressis, foliis solitariis ellipticis acutis membranaceis rigidis margine subreflexis, scapo unifloro medio articulato bibracteato, sepalis lanceolatis acuminatis dorso longitudinaliter carinatis patentibus, petalis latioribus oblongis acutis utrinque attenuatis recurvis, labello subcordato acuto undulato crenu-

lato; lamellis unguis callosis integerrimis antice in rostrum obtusum breve confluentibus, columna aptera puberula.

Wild in Mexico; on oaks near San Onofro, on the banks of the Zimapore river. — C. Ehrenberg.

This is one of the prettiest of the white-lipped Odontoglots. In habit it is hardly distinguishable from O. Rossii, to which I formerly referred it; but it seems to have a dwarfer habit, smaller flowers, and especially thin delicate white sepals banded with brown, instead of green ones; the lip too is acuminate, not rounded, each stem bears but one flower, and the processes at the base of the lip are white, not yellow, and join into an undivided apex instead of a two-lobed one. It is just intermediate between O. Rossii and O. stellatum.

27. ODONTOGLOSSUM APTERUM Lex. Llave, Nov. Descr. 2. 35. L. O. Nr. 5. L. F. 21:

O. „bulbis ovatis depressis; foliis lato-lanceolatis nervosis conduplicatis; scapo tereti paucifloro; gynostemio aptero crasso."

Wild in Mexico; on trees near Irape, flowering in March—La Llave.

Flowers white, with roundish purple spots collected near the base. Lip with a fleshy two-lobed unguis, having in front a pair of diverging teeth, and a crenated limb. Said by La Llave to be very like O. Cervantesii. Seems allied to O. maxillare, which has entire lip.

Huc: *Odontogl. Rossii* Lindl. Sert. Orch. sub t. 25. B. R. 1839. t. 48. L. F. 20:

O. pseudobulbis ovatis caespitosis ancipitibus monophyllis, foliis oblongo-lanceolatis scapo radicali subbifloro longioribus, bracteis membranaceis carinatis acuminatis, sepalis lineari-lanceolatis carinatis acuminatis patentibus, petalis oblongis obtusis revolutis, labello subrotundo ovato emarginato undulato lamellis unguis confluentibus rotundatis denticulis 2 anterioribus obtusis, columna aptera pubescente.

O. acuminatum Hort.

Wild in Mexico—Barker.

A small species, with one or two flowers only on the scape. The sepals are yellowish-green, blotched with brown; the petals are white, spotted with purple at the base. The lip is pure white, and slightly downy.

Huc: *Odontogl. Ehrenbergii* Van Houtte Fl. Serr. IX. 846.

28. ODONTOGLOSSUM NEBULOSUM Lindl. Sert. Orch. sub t. 25. L. F. Nr. 21:

O. pseudobulbis 2—3-phyllis, foliis oblongis acutis basi conduplicatis pedunculo terminali erecto paucifloro brevioribus, bracteis scariosis amplexicaulibus ovario duplo brevioribus, sepalis petalisque latioribus membranaceis oblongis undulatis basi pubescentibus apiculo recurvo, labelli ungue cucullato carnoso lamellis duabus erectis dentibusque totidem anticis, limbo ovato acuto dentato pubescente, columna aptera elongata tomentosa.

Wild in Mexico—Karwinski, Galeotti.

This is the largest of the race with which it is associated; the scape which appears with the young leaves is about a foot high; and the flowers are three inches and a half in diameter. The lip varies in the degree of toothing, being either coarsely toothed, or merely denticulate.

29. ODONTOGLOSSUM GALEOTTIANUM A. Rich. in Ann. Sc. 1845. Jan.' L. F. 22:

Pseudobulbis aggregatis 1-phyllis, folio elliptico lanceolato acuto, scapo foliis duplo longiore 3-floro, labelli „alis erectis obtusis truncatis", limbo subcordato-acuminato, columnae margine alato alis angustis longis.

Wild in Mexico—Galeotti.

„Flowers large, white."

30. ODONTOGLOSSUM MAXILLARE Lindl. in B. R. 1847. t. 62. L. F. Nr. 29:

O. sepalis lanceolatis acutis petalisque latioribus sanguineo-maculatis, labello ovato acuto integro basi maculato appendice unguis maxima alte concava carnosa glabra lutea antice bidentata bilamellata columnae apterae fere longitudine.

Wild in Mexico? —

I have only seen one flower of this beautiful plant, which might at first sight be mistaken for O. Cervantesii. It is, however, readily known by its wingless column, and especially by the very large size of the yellow appendage, seated at the base of the lip, which is scarcely shorter than the column. The flowers are pure white, with rich crimson spots at the base of all the six parts.

31. ODONTOGLOSSUM CERVANTESII Llave, Orch. Mex., 2. 34. L. O., Nr. 4. B. R 1845. t. 36. Paxtons Flower Garden I. t. 15. L. F. Nr. 25:

Pseudobulbis ovatis angulatis, foliis solitariis oblongis in petiolum canaliculatum angustatis, scapo paucifloro, bracteis vaginisque membranaceis acutissimis equitantibus elongatis, sepalis membranaceis oblongo-lanceolatis acutis, petalis latioribus subunguiculatis acutis, labello cordato-ovato ungue carnoso cyathiformi pubescente antice bidentato medio tuberculato processubus 2 elongatis pilosis ante cyathum, columnae pubescentis auriculis rotundatis.

(A.) Lip slightly cordate, acute. Flowers very pale pink.

(B.) *membranaceum*. Lip deeply cordate, retuse. Flowers white.

O. membranaceum Lindl. Sert. Orch. sub t. 25; B. R. 1846, t. 34. Morren, Ann. Gand., I, t. 10.

Wild in Mexico—Karwinski, Barker; B. near Oaxaca—Loddiges.

Flowers large, with broken red concentrical bands at the base of the sepals and petals; very sweet-scented.

Ad b. membranaceum: Pescatorea I. t. 5. Lem. Ill. I. c. t. 12.

32. ODONTOGLOSSUM COERULESCENS Ach. Richard, in Ann. Sc. 1845. Jan. L. F. Nr. 26:

„Pseudobulbis ovoideo-oblongis compressis 1-phyllis, folio oblongo lanceolato acutissimo; scapo 1—2-floro; floribus albido-coerulescentibus; labello cordato, membranaceo, acuto, margine sinuoso, eroso; gynostemio clavato, pubente."

Wild in Mexico—Galeotti.

I have from M. Galeotti, without name, what may possibly be this species. If so, it resembles the preceding in its manner of growth, but the lip is ovate, repand, and obtuse, and the sepals are three times as narrow as the petals. In that case this and O. rubescens may have to be united; but the flowers of the latter are much smaller.

33. ODONTOGLOSSUM RUBESCENS Lindl. in Journ. of Hort. Soc. V. 35. L. F. Nr. 27:

Pseudobulbis uncialibus oblongis compressis monophyllis, racemo 2—6-floro folii longitudine, sepalis lineari-lanceolatis acuminatissimis rectis, petalis tenuibus oblongis undulatis, labello cordato obtuso crispo, unguis lamellis carnosis antice liberis medio cochleatis, columna angusta aptera tomentosa.

Wild in Nicaragua—Skinner.

Remarkable among the white-lipped species for its flowers being suffused with a tender blush colour. The sepals are very narrow, straight and sharp-pointed, richly spotted all over with crimson. The petals are twice as broad, and have similar spots, but only near their base; the lip is spotless, crisp, and cordate.

34. ODONTOGLOSSUM BICTONIENSE Lindl. in B. R. 1840. t. 66; Sert. Orch. sub t. 25. L. F. Nr. 28:

Pseudobulbis oblongis compressis 2—3-phyllis, foliis ensiformibus undulatis patentibus scapo racemoso duplo brevioribus, bracteis herbaceis lanceolatis acuminatis ovario duplo brevioribus, sepalis petalisque subaequalibus lineari-lanceolatis maculatis, labelli ungue bilamellato limbo cordato acuminato undulato, columnae alis transverse oblongis integris.

Cyrtochilum Bictoniense Bat. Orch. Mex. et Guat.. t. 6.
Zygopetalum africanum Hooker in B. Mag. t. 3812.

A stately species with very bright upright racemes of flowers, whose sepals and petals are green spotted with brown, and the lip either lilac or nearly white. It was stated in the „Botanical Magazine", by mistake, to be African.

§. 4. *Myanthium* L. F. p. 11:

Columna auriculata vel aptera. Labellum sessile, vel saltem haud ungue lineari instructum. Sepala lateralia parallela, elongata, manifeste unguiculata. Flores saepe inconspicui.

In this section are collected all the small-flowered species, in which the prevailing colours are yellow and brown, with little brilliancy of tone. They all posses a peculiar irregularity of appearance in consequence of the length and parallelism of the lateral sepals, which project considerably below and beyond the lip. This is especially observable, when the flowers are expanding and when the real proportions between the parts are most readily observable.

a. Labellum cordatum aut basi valde obtusum, in apicem longum carnosum productum.

Obs. *Odontoglossum divaricatum* Lindl. O. Lind. Nr. 89. Tab. Nr. 29: cf. *Oncidium refractum* Rchb. fil. supra p. 707:

35. ODONTOGLOSSUM COSTATUM Lindl. Fol. Nr. 30:

Foliis lanceolatis tenuibus basi angustatis, panicula longa laxa subvolubili, floribus parvis distantibus internodiis duplo brevioribus, sepalis petalisque lanceolatis undulato-crispis recurvis imis semiconnatis, labello basi subrotundo 5-costato limbo longo angusto linguiformi, columnae alis angustis apice dentatis.

Wild in Venezuela; in the province of Truxillo, near Agua de Obispo, at the height of 8000 feet; August—Funck and Schlim, 1028.

A long straggling species, with the aspect of a small-lipped Oncid, but the column is clavate. and distinctly united with the base of the lip. When very young the lip has three central ridges which touch each other, and a pair of tubercles on each side; when the flower is full grown each pair of tubercles has become a rib, and the middle ribs have separated from each other by a considerable interval.

36. ODONTOGLOSSUM DIPTERUM Lindl. Orch. Linden Nr. 87. L. F. Nr. 31:

O. foliis ensiformibus versus apicem latioribus, panicula stricta racemiformi, sepalis lanceolatis sessilibus petalisque oblongis unguiculatis undulatis obtusis, labelli hastati glabri lobis lateralibus rotundatis porrectis subcrenatis intermedio elongato, tuberculis disci duobus acinaciformibus ascendentibus quinque a fronte cuneatis minoribus, columna aptera, anthera pubescente.

Wild in New-Grenada; in the province of Mariquita, at the height of 9000 feet; January—Linden, 1277.

Terrestrial. Pseudobulbs oval, acute. Flower white spotted with purple, the size of Oncidium altissimum.

b. Labellum oblongum, vel basi angustatum in linguam haud productum.

37. ODONTOGLOSSUM DENSIFLORUM Lindl. Orch. Linden Nr. 88. L. F. Nr. 32:

O. foliis lanceolatis elongatis coriaceis basi angustatis panicula contracta paulo brevioribus, paniculae ramulis brevibus flexuosis, sepalis obovatis apiculatis, petalis oblongis unguiculatis, labello oblongo obtuso plano lamellis 3 carnosis subpubescentibus intermedia abbreviata lateralibus antice dentatis, columnae angulis superioribus in dentem productis.

Wild in New-Grenada; the Paramo, near Boyaca, in the province of Tunja, at the height of 11,000 feet; March—Linden, 1877.

Terrestrial with oval roundish pseudobulbs. Flowers yellow, spotted with red; small, and apparently unwilling to spreat flat.

38. ODONTOGLOSSUM ROBUSTUM Rchb. fil. v. Warscewz. Bonpl. II. 100:

Aff. O. densifloro labello oblongo retuso a basi in discum bicarinato, carinis contiguis basi paulisper divergentibus, serie transversa papularum 4 anteposita, gynostemio apice utrinque obtusangulo.

Pedunculus calamum anserinum crassus, validus, ramuli a spathis ovatis acutis membranaceis stipati, flexuosi, pluriflori (—10), internodiis suis breviores, bracteae ovatae apiculatae cucullatae ovaria pedicellata dimidio aequantes, sepala unguiculata, elliptica, apiculata, lateralia strenue deflexa, tepala late unguiculata ovata apiculata, labellum oblongum retusum, a basi medium versus bicarinatum (carinae humillimae), calli quaterni parvi antepositi una serie transversa; gynostemium gracile apice utrinque obtusangulo auriculatum, dorso apiculatum. Blüthen trocken messingroth, so gross wie die des O. ramulosum. Neu-Granada. v. Warscewicz.

39. ODONTOGLOSSUM MACRUM L. F. Nr. 33:

O. foliis lanceolatis elongatis basi in petiolum canaliculatum angustatis paniculae contractae aequalibus, paniculae ramulis brevissimis, bracteis scariosis ovario aequalibus, sepalo dorsali lanceolato erecto lateralibus unguiculatis crasse carinatis, petalis lanceolatis, labello ovato basi concave medio constricto limbo linguiformi lamellis 2 ad basin 2 a fronte plicaque flexuosa utrinque, columna aptera.

Wild in Central-America; Puerto Muelo, at the height of 7000 feet.

A very small-flowered species, with the habit of O. densiflorum. Pseudobulbs terete, semitransparent. Flowers whitish yellow, with purple spots on the labellum. I am unacquainted with the handwriting of the ticket in my herbarium, and do not know from whom I received the specimen, which is numbered 1490.

40. ODONTOGLOSSUM IXIOIDES Lindl. in B. R. 1845. Misc. p. 56. L. F. Nr. 34:

O. caespitosum, fere ebulbe, foliis lineari-lanceolatis acutis striatis scapo simplici apice racemoso triplo brevioribus, bracteis ovario subaequalibus ovatis cucullatis, sepalis petalisque unguiculatis obtusiusculis, labello oblongo obtuso basi bilamellato medio tuberculato $\left(\frac{3}{2}\right)$, columna aptera.

Cyrtochilum ixioides Lindl. Orch. p. 211.

Wild in New-Grenada; on the Paramo St. Fortunato—Goudot.

Scape a foot and a half high; flowers small, apparently yellow, in a short simple raceme, with two or three cucullate bracts a short distance below it.

41. ODONTOGLOSSUM RAMULOSUM Lindl. Fol Nr. 35:

O. foliis loratis coriaceis panicula angusta racemosa brevioribus, bracteis minutis squamaeformibus, pedunculis divaricatis, sepalis peta-

lisque unguiculatis dorsali duplo latiore, labello oblongo obtuso basi bilamellato medio tuberculato $(\frac{3}{2})$, columna aptera.

Wild in Neu-Granada—Funck and Schlim, 1450.

Flowers small, yellow, with a deep brown stain at the base of each sepal and petal. Lip with a brown stain on each side of the principal lamellae. Column purple-brown. In the structure of the flowers this is extremely like O. triodes; but the panicle is long and narrow, with divaricating flowers, whose stalks are much longer, than the scale-like bracts

Rchb. fil. Bonpl. III. 66. Ocahna. ;5000'. Wagener.

42. ODONTOGLOSSUM LONGIPES Rchb. fil. v. Warscwz. Bonpl. II. 100:

Aff. O. ramuloso ovariis pedicellatis longissimis, labello ligulato rhombeo, utrinque medio antrorsum obsolete lobulato, carinis 2 a basi contiguis in disco divergentibus, interjecto denticulo in sinu.

Pedunculus validus calamum columbinum crassus, internodia inter ramulos inaequalia, summa valde approximata, ramuli a vagina ochreata retusa acuta stipati tenues, flexuosi, abbreviati, bracteae triangulae apiculatae cucullatae ovaria pedicellata prope pollicaria vix decima parte aequantes, sepalum summum oblongum apiculatum cuneatum, sepala lateralia longiora, longius unguiculata, elliptica acuta, tepala rhombea obtusangula, labellum rhombeum, ad angulos laterales obtusatos utrinque antrorsum lobulatum, hinc trilobum, carinae 2 a basi ad medium (inter lobulos laterales), ibi divergentes addito in sinu denticulo parvo, gynostemium humile, androclinium marginatum, alae ab angulis summis basin usque descendentes integerrimae. Blüthen trocken röthlichgelb. Peru. v. Warscewicz.

43. ODONTOGLOSSUM MELANTHES Rchb. fil. v. Warscewz. Bonpl. II. 100:

Aff. O. ramuloso labello in medio trilobo, lobis lateralibus rhombeis antrorsis, carinis 2 a basi parallelis contiguis, apice divergentibus.

Pedunculus validus, calamum corvinum crassus, rami a vaginis ochreatis apiculatis medianis stipati, flexuosi, paniculati, ramuli —4-flori, bracteae ochreatae acutae, minimae, ovarii pedicellati subpollicaris nonam aequantes, sepalum dorsale unguiculatum ellipticum acutum, seu lateralia longius unguiculata, caeterum subaequalia, tepala oblongocuneata acuta, labelli lobi laterales antrorsum rhombei, lobus medius a latiuscula basi paulo dilatatus dein triangulus (igitur trapezoideus, lateribus anticis multo longioribus), carinae 2 contiguae apice paulo divergentes a basi usque ante ortum lobi medii, gynostemium humile, dorsum versus retractum, utroque angulo latius integreque alatum, alae apice obtuse apiculatae. Blüthen so gross, wie die des O. *ramulosum* Lindl., schwarzpurpurn, Lippe weissgelb. Peru. v. Wrswcz.

44. ODONTOGLOSSUM RETUSUM Lindl. in Benth. Pl. Hartweg. p. 152. L. F. Nr. 36:

O. foliis lineari-lanceolatis papyraceis scapo paniculato brevioribus, bracteis ovatis, sepalis petalisque subsessilibus lanceolatis acutis supremo canaliculato, labello oblongo retuso basi bilamellato, columnae nanae alis maximis oblongis.

Wild in Peru; on rocks on the mountains of Saraguro; August—Hartweg.

Flowers small, apparently deep yellow.

45. ODONTOGLOSSUM DISTANS Rchb. fil. in Linnaea XXII., p. 848. L. F. Nr. 37:

O. foliis oblongo-lanceolatis acutis basi angustatis pergameneis, panicula diffusa ramis distantibus, bracteis ovatis acutis pedicellis elongatis multo brevioribus, sepalo supremo oblongo acuto basi unguiculato lateralibus subaequalibus medium usque connatis dein divaricatis, petalis duplo latioribus basi subcuneatis sessilibus, labello oblongo acuto basi angustato lamellis 2 erectis carnosis emarginatis in limite unguis lamellaeque, „ovario" brevi crasso aptero.

Wild in Venezuela; in the province of Merida, at Lagunete and Valle, at the height of 7—8000 feet—Funck and Schlim, 1031.

„Petals yellow, sometimes white. Lip rose-coloured at the base. Pseudobulbs creeping." — Funck and Schlim.

Cf. Walp. Ann. III. 559.

46. ODONTOGLOSSUM MYANTHUM Lindl. in Benth. Pl. Hartw. p. 152. L. F. Nr. 38:

O. foliis basi canaliculatis erectis scapo paniculato elongato flexuoso brevioribus, bracteis minutis, sepalis petalisque lineari-lanceolatis unguiculatis acutis, labello lanceolato acuto basi bilineato limbo deflexo, columnae crassae alis obsoletis subulatis.

Wild in Peru; mountains near Loxa—Hartweg.

Leaves a foot and a half long; the scape twice as long; the panicle zigzag, narrow, and very much branched; the flowers minute.

47. ODONTOGLOSSUM LONGIFOLIUM Lindl. in Benth. Pl. Hartw. L. F. Nr. 39:

O. foliis lanceolatis papyraceis basi longe canaliculatis scapo subpaniculato gracili brevioribus, bracteis minutis, sepalis petalisque lanceolatis acutis longe unguiculatis, labello bilamellato oblongo acuto medio deflexo apicibus lamellarum auriformibus divergentibus, columnae alis falcatis minimis.

Wild in Peru; on the Cordillera, near Loxa, in July—Hartweg.

A small-flowered species with a little tendency to branch at the base of a slender few-flowered raceme.

Obs. Odontoglossum zebrinum Rchb. fil. Fol. Nr. 39. cf. *Oncid. zebrinum* Rchb. fil. supra p. 709.

48. ODONTOGLOSSUM MEGALOPHIUM Lindl. Orch. Linden, Nr. 83. L. F. Nr. 40:

O. foliis lanceolatis in petiolum gracilem canaliculatum angustatis, panicula stricta racemosa ramulis subcompositis flexuosis, bracteis membranaceis acutis, sepalis spathulatis apiculatis lateralibus unguiculatis, petalis duplo latioribus sessilibus, labello subcordato-ovato obtuso sub apice carinato, cristae lamellis 2 maximis, columna aptera.

Wild in Venezuela; in the thick forests of the Sierra Nevada, in Merida, at the height of 7000 feet; August—Linden, 682.

A small-flowered plant nearly allied to O. longifolium and myanthum. Pseudobulbs oval, acute, ribbed. Flowers yellow.

49. ODONTOGLOSSUM GRACILE Lindl. in Benth. Pl. Hartw., p. 151. L. F. Nr. 42:

O. foliis oblongis papyraceis basi canaliculatis angustatis scapo stricto gracili subpaniculato brevioribus, bracteis minutis, sepalis petalisque oblongis obtusis longe unguiculatis illis dorso carinatis, labello bilamellato oblongo obtuso limbo deflexo, columnae alis falcatis incurvis acutis.

Wild in Peru; on the Cordillera near Loxa—Hartweg.

Flowers small, reddish brown, with usually flat rounded sepals and petals. The scape is less than a foot high, with a slender raceme of seven or eight flowers at the end, and a very short branch with two or three flowers near its base.

Obs. Odontogl. cimiciferum Rchb. fil. L. F. Nr. 43. cf. *Oncid. cimiciferum* Rchb. fil. supra p. 712.

50. ODONTOGLOSSUM MENTIGERUM Rchb. fil. v. Wrscwz. II. 100:

Mento producto, labello cordato oblongo acuto subtrilobo, carinis undulatis 2 parallelis per discum.

Panicula diffusa, ramorum ramuli abbreviati, flexuosi, pauciflori, bracteae squamiformes quartam ovarii pedicellati aequantes, sepala anguste unguiculata

ovata acuta, lateralia paulo longiora, tepala obovata acuta, labellum trilobum, lobi laterales rotundati, basi semicordati incisura minuta disjuncti a lobo antico ovato acuto, carinae 2 a basi usque ante apicem labelli erectae undulatae, gynostemii androclinium marginatum, quinquelobum, anguli alati, alae ab apice gynostemii pedem (!!) brevem usque descendentes integerrimae (anthera ac pollinia geneticae). Braunblüthig. Blüthchen halb so gross, wie die des *O. ramulosum* Lindl.

Peru. v. Warscewicz.

51. ODONTOGLOSSUM FORCIPATUM Lind., Rchb. fil. Bonpl. II. 279:

Affine Od. mentigero labello ambitu triangulo basi utrinque rotundato, lateribus utrinque angulis insilientibus trilobo, lobo medio triangulo acuto, carina humili a basi in discum, carinis 2 semiovatis antice acutis inter sinus loborum in medio labello, gynostemio superne clavato aptero basi in pedem descendente.

Folium oblongum acutum basi cuneatum 6—8-pollicare. Panicula ramosissima, polyclada, flexuosa. Bracteae triangulae abbreviatae. Flores parvi, clausi. Sepalum summum ligulato ovatum acutum. Sepala lateralia more tribus labello bene supposita a basi angusta cuneata oblonga acuta. Tepala ovata acuta basi cuneata, breviora, latiora. Labelli trilobi lobi laterales semiovati, lobus medius triangulus; carinae 2 semiovatae antice acutangulae in disco. Blüthen gelb, braun gefleckt. Neu-Granada. Wälder Ocannes. Juni 1852. 1160. Schlim.

§. 5. *Isanthium* L. F. p. 15:

Columna auriculata vel aptera. Labellum sessile, vel saltem haud ungue lineari instructum. Sepala subaequalia, radiantia, lateralibus omnino sessilibus, aut parum unguiculata. Flores speciosi.

The species thus separated from Myanthium approach that section by O. auropurpureum and its allies, but they never have in the same degree that manifest prolongation and parallelism of the lateral sepals which characterises Myanthium, as is readily seen upon inspecting the expanding flower-buds. All the species are handsome, with large yellow or white flowers; some preeminently so. In the first division the sepals and petals are narrow, and stand wide apart when expanded; in the second division, in consequence of their increased breadth, these organs almost or quite overlap each other.

a. Sepala et petala sub anthesi longe distantia.

52. ODONTOGLOSSUM AUROPURPUREUM Reichenbach fil. in Linnaea 22. 848. L. F. 15

O. foliis planis lanceolatis acutis angustatis, panicula diffusa maxima, bracteis oblongis apiculatis cucullatis, sepalis oblongis acuminatis unguiculatis undulatis lateralibus paulo longioribus basi subconnatis, petalis conformibus brevioribus basi cuneatis, labello sessili acuminato convexo basi dilatato rotundato laevissime trilobo, cristae carnosae glabrae laminis lateralibus magnis integerrimis callis teretibus $\left(\frac{3}{2}\right)$, columna aptera.

Wild in Peru — W. Lobb; in Venezuela—Funck and Schlim, 1430.

Stem six feet high.—F. and S. Flowers golden-yellow, marked with purple.—Rb. A noble species with a stiff much-branched panicle of flowers, the stalks of which are twice as long as the internodes. Each flower measures about two inches in diameter. The bracts are almost equal to the internodes in some cases. Mr. Lobb's Peruvian specimens have a more compact inflorescence and larger flowers than those from Venezuela.

Walp. Ann. III. 559. — Rchb. fil. in Bonpl. II. 279: Blüthen goldgelb, gefleckt mit karminroth — Pamplona, 9—10000'. Januar Nr. 1185. Schlim.

53. ODONTOGLOSSUM REVOLUTUM Lindl. in Ann. Nat. Hist. 15. 256. L. F. Nr. 45:

O. foliis ensiformibus rigidis margine revolutis scapo rigido apice pyramidali paniculato brevioribus, bracteis laxis acutis cucullatis internodiis paulo brevioribus, sepalis petalisque lanceolatis unguiculatis undulatis acuminatis lateralibus paulo longioribus, labello cordato subrotundo in limbum linearem cuspidatum producto, cristae carnosae glabrae laminis lateralibus maximis intermedia filiformi apice in dentem validum producta digitis 2 utrinque, columna aptera.

Wild in Popayan; on the Paramo of Guanacas, at the height of 11,000 feet—Hartw.

This differs from the last in having a dense pyramidal panicle about eight inches long by five wide, and stiff leaves rolled back on either side up to the midrib. The crest is similar, except that the middle of the three anterior lobes is much larger than the others near it. The flowers appear to be yellow.

54. ODONTOGLOSSUM LINDENII L. F. Nr. 46:

O. foliis erectis ensiformibus scapo paniculato duplo brevioribus, paniculae ramis patentibus distantibus secundifloris, bracteis membranaceis cucullatis oblongis apiculatis internodiis aequalibus, sepalis petalisque unguiculatis lanceolatis undulatis acutis, labello ovato-lanceolato, cristae carnosae glabrae laminis lateralibus maximis intermedia filiformi apice dilatata libera digitis 2 utrinque teretibus in 4 planas emarginatas suppositas incumbentibus, columna aptera.

Wild in New-Granada, at the height of 9000 feet—Linden, 82.

Smaller than auropurpureum, larger than revolutum. Leaves not quite a foot long; scape from two to threet feet high, with uniform lateral arms for more than half its length, each arm bearing from seven to five flowers, which form a regular unilateral rank directed upwards. The crest has, in addition to the parts found in the two previous species, four irregular flaps placed below the finger-like processes of its extremity.

55. ODONTOGLOSSUM RAMOSISSIMUM L. F. Nr. 47:

O. foliis longissimis ensiformibus acutis gramineis basi angustatis, panicula maxima ramosa divaricata, bracteis obtusis membranaceis ovario paulo brevioribus, sepalis unguiculatis petalisque angustis lanceolatis undulatis, labello sessili cordato basi dilatato undulato tomentoso in limbum convexum lanceolatum extenso, crista tomentosa lamellis 2 lateralibus latis antice cirrhatis quinque brevibus a fronte, columna aptera.

O. angustatum Lindl. Orchid. Linden Nr. 90.

Wild in Venezuela; in the thick forests in the neighbourhood of Merida, at the height of 6500 feet—Linden, 661.

„A magnificent epiphyte. Pseudobulbs oval, compressed; stem three or four feet high, covered with innumbrable flowers of a brilliant white. Petals rosy-purple at the base. Lip purple.“ — Linden. The panicle of this plant is very stiff and excessively branched in an angular straggling manner. In the general form of the parts it much resembles O. angustatum, to which I formerly referred it; but a more accurate examination shows that it is essentially different, the lip being cordate, not narrowed to the base, and the crest downy all over with a different arrangement and form of the lobes.

I am unacquainted with the variety heterosepalum, mentioned by Mr. Reichenbach in the „Linnaea“; Nr. 1242. of Funck and Schlim's collection not having reached me.

Rchb. fil. Bonpl. II. 12: Diese Pflanze ist unsern Orchideenfreunden nicht genug zu wünschen. Wohl hundert grosse rosenrothe Blüthen mit Purpurlippe prangen an weiter Rispe. Merida. Wagener.

56. ODONTOGLOSSUM ANGUSTATUM Lindl. in Bot. Reg. sub t. 1992. L. F. Nr. 48:

O. pseudobulbis compressis, foliis longis lato-lanceolatis erectis scapo gracili brevioribus, panicula flexili, bracteis carinatis cucullatis acutis internodiis duplo brevioribus, sepalis linearibus acuminatissimis lateralibus unguiculatis, petalis latioribus et brevioribus, labello ovato-lanceolato acuminato basi angustato, cristae lamellis lateralibus membranaceis tridentatis glabris intermedia triplici filiformi tomentosa apice in callum et cornua 2 lateralia expansa in appendicem bicornem pariter tomentosum suppositum incumbentia, columna elongata aptera.

Wild in Peru; in the valley of Lloa, at the height of 8000 feet—Hall; in the woods of Guayan, on the western declivity of Pichincha—Hartweg.

A much more slender plant than the preceding. Sepals one inch and a half long and scarcely more than a line broad. The flowers appear to be spotted. The membraneous smooth-toothed side lobes of the crest of the lip and the long downy horns which terminate it are remarkable.

57. ODONTOGLOSSUM PARDINUM Lindl. in Sert. Orch. sub t. 25. L. F. Nr. 49:

O. foliis lineari-oblongis basi angustatis striatis scapo stricto laxe paniculato subaequalibus, bracteis membranaceis cucullatis acutissimis, petalis undulatis sepalisque angustioribus lanceolatis, labello unguiculato ovato-lanceolato acuminato, cristae pubescentis lamellis lateralibus basi dentatis apice 3-partitis intermedia elevata in fronte adjectis callis quibusdam teretibus, columna aptera.

Wild in Peru; on the ground near Surucucho—Jamieson; the Andes of Popayan—Hartweg.

Flowers handsome, yellow, spotted with brown in the original form sent to Sir William Hooker by Professor Jamieson. The Popayan plant is somewhat different; the flowers are smaller and apparently not spotted; and the crest of the lip is more downy with a few more teeth in front. The two plants can hardly however be distinct. I have from Professor Jamieson what appears to be identical with the Popayan form.

58. ODONTOGLOSSUM WAGENERI Rchb. fil. in Bonpl. II. 12:

Panicula brachyclada rariflora, bracteis membranaceis obtusis ovaria crassa dimidio aequantibus, floribus illos O. revoluti subaequantibus, sepalis cuneato unguiculatis paulo dilatatis lanceolatis acutis, summo breviori, tepalis cuneato oblongis acutis sursum falcatis sessilibus lamina sepali summi ter latioribus, labello a cuneata basi ovali tertio antico proboscideo lineari retuso, callis acutiusculis subvelutinis quatuor biseriatis in disco, quinto aequali in disco illis interposito, gynostemio crasso aptero dimidium labellum aequante.

Sepala grün mit violetten Flecken. Tepala violett mit goldgelber Spitze. Lippe violett, Schwielen und Saum gelb. Säule unten grün, oben violett. Spitze gelb. Neben Od. *revolutum* Lindl., das einen herzförmigen Grund der Lippe und eine weitere Rispe besitzt. Caracas. 6000'. Mai. Wagener.

59. ODONTOGLOSSUM SPATHACEUM L. F. Nr. 50:

O. foliis oblongis basi conduplicatis, scapo erecto dense paniculato, bracteis oblongis spathaceis apiculatis internodiis longioribus, sepalis angustis acuminatis, petalis duplo latioribus, labello ovato-lanceolato, cristae pubescentis lamellis lateralibus apice unidentatis et bicirrhosis in appendicem bilobum bifalcem longiorem suppositam incumbentibus, columna elongata aptera.

Wild in New Grenada—Purdie.

A noble plant, with large panicles of spotted flowers, apparently yellow, with sepals an inch and a half long. The bracts are much larger and more spathaceous, than in the allied species.

60. ODONTOGLOSSUM HASTILABIUM Lindl. in Orch. Linden. Nr. 84; Hooker Bot. Mag. tab. 4272. L. F. Nr. 51:

O. foliis oblongis coriaceis, paniculae ramis spicatis, bracteis cymbiformibus acuminatis ovario aequalibus, sepalis petalisque lineari-lanceolatis acuminatis undulatis, labello apice subrotundo-ovato acuto basi auriculis acutis lanceolatis porrectis aucto lamellis 5 elevatis, columnae alis obsoletis undulatis margine versus basin membranaceo dilatato.

Wild in New Grenada; Tesqua, in the province of Pamplona, at the elevation of 2500 feet; April—Linden, 1876; on the road from Santa Martha to the Sierra Nevada—Purdie.

This handsome species has flowers three inches in diameter, with the appearance when dried, of O. laeve, but the flowers are white and sweet-scented. Petals and sepals greenish or greenish white, barred with red. Lip white, purple at the base. The base of the column, which is expanded on either side into an inflexed membrane, resembles that of cristatum and some others, but is very different from the tumid base of the genus Oncidium.

Bonpl. II. 219: Ocanna. Januar 5—6000'. Schlim 414. — Bonpl. III. 66. Ocanna 5000'. Wagener. — Pescatorea I. t. 11.

61. ODONTOGLOSSUM LAEVE Lindl. in Bot. Reg. 1844. t. 39 L. F. Nr. 52:

O. pseudobulbis compressis sulcatis, foliis oblongo-ensiformibus obtusis apice obliquis, floribus laxe racemoso-paniculatis, bracteis brevibus membranaceis, sepalis petalisque oblongo-linearibus acutis planis, labelli limbo panduriformi apiculato ungue laevi obsoletissime bidentato, columnae alis apice rotundatis crispis basi planis.

Wild in Guatemala—Skinner.

The fragrant flowers have cinnamon-brown blotches on the yellow ground of the petals and sepals; and the lip, which is white, is banded with violet across the middle. The absence of all but rudiments of a crest upon the lip is a very peculiar feature.

62. ODONTOGLOSSUM KARWINSKII Rchb. fil. in Bonpl. III. 214. Huc: *Miltonia Karwinskii* Lindl. Journ. Hort. Soc. IV. 77. c. ic.:

Scapo paniculato, sepalis petalisque oblongo-lanceolatis apiculatis, labello obovato rigido cristato venis centralibus recurvantibus lamellatis, auriculis columnae serratis, caudicula obovata.

Oncidium Karwinskii Lindl. Sert. sub t. 20.
Cyrtochilum Karwinskii Lindl. Bot. Reg. sub 1992.

Wild in Mexico: Karwinski in hb. reg. Monac.

A fine species with flowers $2^{1}/_{4}$ inches in diameter. Sepals and petals banded with brown on a yellow ground. Lip deep violet on the lower half, pale on the upper; the lateral sepals placed exactly beneath it. — Paxt. Mag. VI. XVI. Paxt. Fl. G. II. c. xyl. Van Houtte VII. p. 32. Xyl. ex Paxt. Mag. XVI. — Paxt. Fl. G. xyl. floris.

Obs. Mirum, plantam adeo spectabilem adeo rarissimam mansisse. Unde venerint, quae in Anglia floruere specimina, non novi. In herbariis non nisi Karwinskiana occurrere mihi specimina.

63. ODONTOGLOSSUM REICHENHEIMII Lind. Rchb. fil. in Bonpl. III. 214:

Aff. O. Karwinskii Rchb. fil. (Oncidio Karwinskii Lindl.) et O. laevi Ldl. gynostemii alis obsoletis apice et basi lobulum minutum sistentibus, labello oblongo basi cordato apice obtusato lobulato, callo tumido utrinque ante basin, carina gemina ante basin extabulatam gynostemii (cf. Pescatoream).

Tracht des *Odontoglossum laeve* Lindl. Dagegen in allen Theilen grösser. Der grosse Blüthenstand zwei Fuss lang und länger, zickzackig, unten mit einigen Seitenzweiglein; weder schlaff und stark rispig, wie bei O. Karwinskii, noch so gedrängt wie bei O. laeve. Blüthe wenig kleiner, als die des O. Karwinskii. Hüllblätter bedeutend schmäler, namentlich die Sepala; von Farbe grün mit Purpurbinden. Lippe am Grunde fleischig, vor dem Grunde purpurviolett, vorn weiss. Säule in der Mitte unter der Narbenhöhle mit Längskiel. Odont. Karwinskii ist vor Allem durch die oben und unten spitzen gesägten grossen Säulenflügel, viel breitere Hüllblätter, an der Spitze zweilappige und vorn sehr ausgebreitete, also geigenförmige Lippe gut unterschieden. Der Blüthenstand ist bekanntlich eine schlaffe überhängende Rispe. Die Binden auf den Sepalen und Tepalen sind nach einem anderen Plane angelegt. Die Buckel auf dem Lippengrunde des Reichenbeimii fehlen hier. *Odontoglossum laeve* Lindl. hat eine am Grunde ganz schmale und vorn ausgebuchtete Lippe, welche erst höher über der Basis umgeknickt ist, während O. R. und K. dieses gleich am Grunde thun. Ferner ist die Säule am Od. laeve unter der Narbe ausgehöhlt und hat keinen Kiel. Endlich sind die Säulenflügel sehr gross. — Diese Art theilt sich in den Wohlgeruch des *Odontogl. laeve* Lindl. und die Farbenpracht des O. Karwinskii. Aus Mexico von Herrn Ghiesbreght an Herrn Linden gesendet. — Pescatorea T. 19.

64. ODONTOGLOSSUM CRISTATUM Lindl. in Benth. Pl. Hartw. p. 152. L. F. Nr. 53:

O. foliis lineari-lanceolatis acutissimis scapo multifloro simplici paullo brevioribus, sepalis petalisque lanceolatis acuminatis, labello lanceolato acuminato limbo deflexo, crista glabra multipartita laciniis anticis latioribus, columna elongata basi membranaceo-marginata apice alis duabus uncinatis, anthera cristata.

Wild in Peru; mountains of Paccha—Hartweg.

Flowers spotted with brown, about as large as those of O. cordatum. Leaves very narrow.

65. ODONTOGLOSSUM LACERUM Lindl. in Sert. Orch. sub t. 25. L. F. Nr. 54:

O. pseudobulbis ovalibus ancipitibus, foliis lineari-oblongis in petiolum canaliculatum angustatis, racemo subpaniculato terminali gracili, bracteis longe distantibus ovatis acutis squamaeformibus, sepalis petalisque lanceolatis acuminatis, labelli limbo deflexo ovato-lanceolato lacero concavo apice cuspidato, cristae lamellis fimbriatis denticulis 2 anterioribus subulatis, columna glabra auriculis subtruncatis.

Wild in Peru; Casapi—Matthews, 1867.

Flowers large, bright lemon colour, with a brown blotch or two in the middle of the sepals and petals, and another at the upper half of the lip. Inflorescence very slender, with the flower-stalks not half the length of the internodes.

b. Sepala et petala sub anthesi imbricata.

66. ODONTOGLOSSUM PESCATOREI Linden in Paxt. Fl. Garden III. t. 90. L. F. N. 56:

O. pseudobulbis ovatis leviter costatis diphyllis, foliis loratis planis basi angustatis, panicula erecta diffusa multiflora, bracteis minutis, floribus membranaceis, sepalis ovato-oblongis apiculatis leviter undulatis, petalis conformibus duplo latioribus, labello cordato oblongo cuspidato subpandurato basi denticulato, cristae lamellis lateralibus distantibus cartilagineis laceris lineis duabus elevatis divergentibus apice denticulatis interjectis, columnae brevis alis brevibus laceris.

? *O. nobile* Reichenbach fil. in Linnaea 22. 850.

Wild in New-Grenada, in the province of Pamplona—Funck and Schlim.

Of this fine plant the panicle is from two to three feet high, and not much narrower. The flowers are of ample size, of a delicate semitransparent texture, with a faint blush line along the middle of the sepals, and a stain of yellow near the base of the lip, where also are found a pair of broad deep crimson lateral lamellae belonging to the crest, in the form of two lacerated appendages. The column itself is white. The ragged wings are stained with crimson. Since the publication of this in Paxton it has occurred to me that it is probably the O. nobile of Reichenbach fil., for which he quotes Funck and Schlim's collection, no. 1429, a number which I do not possess; but unless there is some typographical error in the learned author's specific character which destroys its meaning, his plant must be different, especially since he describes the lip as purple, and the other parts rose-coloured. My specimen of Pescatorei is without a number, but with a reference to an unpublished drawing, no. 69, which I have not seen. I am the more uncertain whether this can be O. nobile, because there is in reality nothing to separate it from Odontoglossum, as Professor Reichenbach partly suggests, the species being in truth extremely near O. crispum, the ragged crimson appendages at the base of the lip being evidently identical with the lateral plates so generally found in this genus.

Lindl. Paxt. Fl. G. III. 174:

It now appears that this beautiful plant fig. at plate 90, had been previously described by Mr. G. Reichenbach under the name of Odontogl. nobile, as has been suggested in the Folia O. It was however impossible the recognize to description, in consequence of the misprints which it contained; and we question whether under such circumstances Mr. Linden's name can be disturbed.

Obs. Lapsus non insunt in descriptione. Equidem amico Linden nomen pro hortis lubenter cessi. Sed modus lapsus indicandi, ubi lapsus non adsunt (calli enim carinae ipsi Lindley saepe synonyma), haud probandus. Rchb. fil. — Cf. v. Schl. B. Z. 1852. Gartenorch. Nr. 85. Rchb. fil. Bonpl. II. 278. Ocanna. Wälder. Juli. 7000'. Schlim. — Bonpl. III. 66. Ocanna. Wagener. — Pescatorea I. t. 6. — Lem. Jard. Fl. IV. 331. — Walp, Ann. XIII, 560.

67. ODONTOGLOSSUM WARSCEWICZII Rchb. fil. in v. Schl. B. Z. 1852. 692:

Perigonii phyllo summo oblongo cuneato, obtusato, phyllis lateralibus externis oblongis acutis, angustioribus, lateralibus internis oblongis, cuneatis; labello a basi latissime cuneata dilatato, pandurato-quadriloba, lobis lateralibus obtusatis, minoribus, vix productis, lobo anteriori late cuneato, alte bilobo, lobo utroque obtuse rhombeo, marginibus externis hinc sinuato, denticulo minutissimo interposito inter utrumque; callo erecto hippocrepico (maxillari) antrorsum clauso papillis velutino cum denticulo corneo inflexo in medio, basilari in ima labelli parte suberecto, gynostemio humillimo, fovea stigmatica magna, oblonga, denticulo in limbo inferiori, alis integris, angustissimis, foveam stigmaticam marginantibus.

Eine der herrlichsten Entdeckungen unseres Reisenden. Die schneeweissen Blüthen tragen einen goldigen Kamm, der von dem schönsten Purpurroth gesäumt ist. Meine grösste Blüthe ist zwei Mal so gross als die des Oncidium sessile (im getrockneten Zustande): mithin nächst O. grande eine der grössten Blüthen neben O. nebulosum. Blätter länglich, spitz. Deckblätter spitz-dreieckig, häutig, einnervig, sieben Mal kürzer als der Stiel des langen Fruchtknotens. Blüthenstiel wenigblüthig. Cordillera de Chiriqui. 8000' auf Leguminosen. October—Januar. L. F. sub 21° addit.

68. ODONTOGLOSSUM PHALAENOPSIS Lind. Rchb. fil. in Bonpl. II, 278:

Affine Odontoglosso Warscewiczii Rchb. fil., foliis linearibus acutis, racemo bifloro, sepalis oblongo-ligulatis acutis, tepalis obovatis obtusis, labelli pandurati portione antica latiori emarginata hinc lobulata, carinis 2 ad pedem gynostemii, una in medio anteposita, carinulis 2 antice

nunc unilamelligeris verruculis quibusdam utrinque circumjectis, disco velutino, gynostemii minuti alis membranaceis abbreviatis integris.

Pseudobulbus ligulatus anceps basi subdilatatus monophyllus. Folium ultra pedale apice acutissimum. Pedunculus nunc spithamaeus. Flores illis Odontoglossi Warscewiczii nunc aequales. Perigonium candidum. Labellum hinc roseo aspersum. — Eine treffliche Acquisition für unsere Häuser! Die schönen grossen Blüthen sind geeignet, mit Miltonia spectabilis und mit Phalaenopsis in die Schranken zu treten. Ein treffliches Bild liegt für die Pescatorea vorbereitet. Ocanna. Wälder bis 4000'. Nr. 501. Schlim.

Pescat. t. 41. — Bonpl. III. 66. Ocanna: 6000'. März. Wegener.

69. ODONTOGLOSSUM OERSTEDII Rchb. fil. Bonpl. III. 214:

Sepalis triangulis, tepalis obovatis retusiusculis, labello flabellato apice quadrilobo, sinu medio profundo, callo depresso ante basin angustam cordatam rhombeo apice bilobo, tumore velutino papuloso in centro, gynostemio aptero postice velutino.

Pseudobulbus anceps pollicaris. Folium tripollicare — quadripollicare, basi petiolato angustatum, lamina cuneato oblonga acuta. Pedunculus gracilis paucivaginatus uniflorus. Flos albus callo aureo maculis purpureis picto lineolis tribus flavis antepositis illi *Odontoglossi pulchelli* Bat. aequalis. In monte Irasu ad St. Juan. 9000'. Oersted! Adest etiam icon a cl. Warscewicz confecta.

70. ODONTOGLOSSUM CRISPUM Lindl. in Ann. Nat. Hist. 15. 256. L. F. Nr. 57:

O. foliis lanceolatis scapo multifloro paniculato (nunc brevi racemoso) brevioribus, bracteis ovatis acutis cucullatis internodiis multo brevioribus, sepalis ovato-lanceolatis petalisque ovatis acutissimis crispis laceris membranaceis, labello subconformi basi cuneato, cristae lamellis lateralibus brevibus tridentatis duabus alteris linearibus apice liberis interjectis, columnae alis rotundatis laceris.

Wild in New-Grenada; in the woods between the villages of Zipaquira and Pacho, in the province of Bogota—Hartweg.

A most beautiful species, occasionally as much as three feet high and more. Flowers large, yellow, with a purple spotted centre. Column deep purple. Differs from the last in the colour of the flowers, and in the form of the lip and its crest, but otherwise very similar.

71. ODONTOGLOSSUM PYGMAEUM Lindl. in Benth. Pl. Hartw. p. 82:

O. pseudobulbis ovalibus vaginis membranaceis acuminatis vestitis, foliis anguste ovalibus in petiolum angustatis racemo paucifloro flexuoso duplo longioribus, sepalis petalisque subaequalibus, labelli pubescentis rhombei dentati sessilis crista maxima bivalvi in medio tumida; valvis erectis rotundatis, columna brevi clavata aptera, ovario triptero.

Wild in Guatemala; at the foot of the active volcano Xetuch, about 8000 feet above the sea, near Quezaltenango—Hartweg.

This curious little alpine plant forms tufts of pseudobulbs and membranous sheaths, from among which just peep out the tiny colourless flowers, which are not above three lines in diameter, even if spread out. I have not seen the pollen-masses and it may not belong to this genus.

Huc: *Rhynchostele* Rchb. fil. in v. Schl. B. Z. 1852. 771:

Perigonii phylla lanceolata acuto-acuminata. Labellum trilobum. Lobi laterales basilares trianguli, subcarnosi, margine antico incrassato transcendentes basin lobi medii, lateribus erecti, margine postico gynostemio appressi, fundo inter utrumque bilobo tumido; lobus medius membranaceus obtuse rhombeus, margine lobulato subtiliter denticulatus, primum ascendens. Gynostemium ab angusta basi transsectione

perpendiculari rhombeum postice tricarinatum, limbo pone stigma tumido. Androclinium terminale, horizontale, quadratum, basin versus dilatatum limbosum, descendens in processum rostellarem oblongum, retusum, canaliculate limbosum ultra medium, stigma ovatum, basi angulato-protensum, maximum. Pollinia duo globosa, nullo pacto sulcata; caudicula linearis, glandula oblonga utrinque acutiuscula.

Rh. pygmaea (Odontogl. pygmaeum Lindl. in Benth. Pl. Hartw. 82.*)*: Ich glaube, dass die ganz eigenthümliche Narbendecke, die ungespaltenen Pollinia, die eigene Gestalt der Säule und die Lippe diese Pflanze völlig von den ächten Odontoglossen unterscheiden.

§. 6. *Trymenium* Lindl. in Bot. Reg. 1843. t. 3. L. F. p. 21:

Clinandrium cucullatum, margine membranaceo saepe tripartito.

At first sight this would seem to be a distinct genus, and it may be hereafter considered so. But if any botanist should think the structure of the crest available for a generic character, I would remind him, that, although there is no apparent analogy between the crest of some of the Trymenia and that of the Isanthia, so neither do agree among each other in that respect, the crests of every species except brevifolium and coronarium being formed upon a different plan, and O. citrosmum having no crest at all.

72. ODONTOGLOSSUM CITROSMUM Lindl. Bot. Reg. 1842. Misc. 68, 1843, t. 3. L. F. Nr. 59:

O. pseudobulbis subrotundis compressis laevibus, foliis oblongo-ligulatis obtusis racemo paulo brevioribus, sepalis oblongis obtusis petalisque conformibus subaequalibus, labello unguiculato reniformi basi excavato marginibus callosis, clinandrii alis lateralibus subtruncatis dorsalique rotundato denticulatis.

Wild in Mexico—Karwinski.

Flowers very large, white, fragrant, stained with pink; the violet-coloured lip orange-yellow at the base.

Lem. Jard. Fl. Tab. 90.

73. ODONTOGLOSSUM CORONARIUM L. F. Nr. 60:

O. pseudobulbis ovalibus compressis, folio oblongo coriaceo basi canaliculato, racemo longo multifloro, bracteis linearibus canaliculatis ovario triplo brevioribus, sepalis petalisque subrotundis unguiculatis planis, labello longe cuneato retuso basi auriculis unidentatis subfalcatis obtusis subtus in unam connatis aucto, inter auriculas tuberculis 2 hoc didymo illo inferiore simplici acuto, clinandrio subserrato lobis rotundatis.

Wild in Neu-Granada; province of Pamplona near La Baja, at the height of 7000 feet—Schlim, 1197.

One of the finest species in the genus. Leaves ten inches long by two and a quarter broad. Raceme a foot long, loaded with as many as eighteen flowers, all expanded at the same time, and one and three quarters of an inch in diameter; brown, the petals bordered with yellow, the lip brown and yellow, the column white. Terrestrial.

Pescat. t. 47.

74. ODONTOGLOSSUM BREVIFOLIUM Lindl. in Benth. Pl. Hartweg. p. 152. L. F. N. 61:

O. foliis ovato-oblongis oblongisque patentibus, scapo simplici, bracteis oblongis membranaceis pedicellorum longitudine, sepalis subrotundis unguiculatis undulatis, petalis paullo minoribus, labello unguiculato auriculato cuneato emarginato sepalis breviore basi tuberculis verrucosis 5 et appendice parva antica 3-dentata aucto, clinandrio cucullato serrato in marginem membranaceum alaeformem decurrente.

Wild in Peru; on the Cordillera near Loxa; July—Hartweg.

Pseudobulbs ovate oblong compressed, one leaved. Leaves two inches broad, and sometimes not much longer. Flowers an inch and a half or more in diameter, eleven or twelve in a drooping raceme, apparently purple.

75. ODONTOGLOSRUM CHIRIQUENSE H. G. Reichenbach in Bot. Ztg. Oct. I. 1852. L. F. Nr. 62:

O. sepalis oblongo-cuneatis obtusis crenulato-crispulis, petalis subaequalibus vix brevioribus supra basin brevissime cuneatam hastatis, labello ima basi cum columna parallelo trilobo lobis basilaribus triangulis margine postico curvilineis divaricatis lobo medio longe producto a cuneata basi dilatato antice rotundato crenulato undulato, crista oblonga paucicrenata inter lobos laterales cristulis inde in marginem anteriorem laciniarum lateralium transeuntibus, columna gracili; alis triangulis margine superiori denticulatis, clinandrii cucullo acutiusculo denticulato, lacinula triangula sub stigmatis labium inferum sistente.

Wild in Veragua; on the Cordillera of Chiriqui, at the height of 9000 feet, on decayed trunks; in October—Warscewicz.

Flowers as large as in *Oncidium crispum*. — Rchb. Pseudobulbs oval. Leaves in twos, large and green. Sepals brown. Petals and lip golden-yellow. — Warczewicz.

Rchb. fil. l. c.:

Perigonii phyllis externis oblongo-cuneatis, obtusis, crenulato-crispulis, lateralibus internis subaequalibus, vix brevioribus, supra basin brevissime et anguste cuneatam tamen obtuse hastatis, labello ima basi cum gynostemio parallelo, trilobo, lobis lateralibus basilaribus triangulis margine postico (et inferiori) curvilineis, divaricatis, lobo medio longe producto, a cuneata basi dilatato, antice rotundato, crenulato, undulato, lamina oblonga depressa paucicrenata erecta in basi inter utrumque lobum lateralem cristulis inde in marginem anteriorem (et superiorem) laciniarum lateralium transeuntibus, gynostemio inferne gracili, alis lateralibus triangulis, margine superiori denticulatis, androclinio postice cucullato, cucullo acutiusculo denticulato membranaceo, lacinula triangula sub fovea stigmatica labium inferum sistente.

Ich erhielt nur Blüthen. Sie sind so gross, wie die des Oncidium crispum, denen sie entfernt ähnlich sind. Nächst *O. brevifolium* Lindl.! Letzteres hat um ein Drittheil kleinere Blüthen, viel feinere Kerbzähne; die seitlichen, inneren Hüllblätter sind sitzend. Der Plan der Lippe und Säule ist völlig derselbe, aber diese hat nur kleine Oehrchen, ein kurzes, buckeliges Anhängsel. Das Zäpfchen unter der Narbenhöhle ist stumpf. — „Trugknollen oval. Zwei grosse, grüne Blätter. Innere Hüllblätter und Lippe goldgelb. Aeussere Hüllblätter braun. Cordilleren von Chiriqui. 9000'. Auf verfaulten Baumstämmen. October. v. Warscewicz.

76. ODONTOGLOSSUM ARMINII Rchb. fil. Bonpl. III. 66:

Simillimum Odontoglosso coronario Lindl., labelli auriculis falcatis acutis postice serrulatis, in margine antico papulosis, callo teretiusculo apice papuloso ante pedem gynostemii eidem semiadnato, gynostemio brevi crasso apice triptero, ala postica semirotunda denticulata, alis anticis quadratis, margine externo denticulatis.

Rhizoma repens. Pseudobulbi ovati ancipites monophylli. Folia cuneato-oblonga acuta subtus obscure violacea. Pedunculus apice racemosus. Bracteae lanceolatae acutae ovariis pedicellatis quinquies breviores. Flores illis O. coronarii subdimidio majores. Sepalum summum cuneato-obovatum. Sepala lateralia cuneato-ovata minora. Tepala a basi cuneata lato rotundato cordata subpanduraeformia. Omnia haec organa crispula denticulata. Labelli lobus medius cuneato-flabellatus verosimiliter albus. Ocanna. März. 7000'. Wagener.

77. ODONTOGLOSSUM PULCHELLUM Bateman in Bot. Reg. 1841. t. 48; Bot. Mag t. 4104. L. F. Nr. 63:

O. pseudobulbis oblongis compressis ancipitibus diphyllis, foliis linearibus (vix semuncialibus pedalibus) apice oblique emarginatis, scapo foliis aequali ancipiti debili apice racemifero 6-7-floro, bracteis herbaceis linearibus acuminatis, sepalis ovatis acutis, petalis obovatis acutis subundulatis, labelli trilobi laciniis lateralibus triangularibus intermedia oblonga subquadrata apice recurva, callo baseos carnoso antrorsum hippocrepico retrorsum trilobo, columnae alis et clinandrio laceris.

Wild in Guatemala—Skinner.

The more striking features in this species are long thin pseudobulbs, very narrow grassy leaves, and a single protuberance at the base of the white lip. This protuberance is deep yellow spotted with crimson, very fleshy, firm and shining, and is almost horseshoe-shaped in front, while it is distinctly threelobed behind, in consequence of two deep depressions.

78. ODONTOGLOSSUM EGERTONI Lindl. Bot. Reg. 1845. Misc. p. 50. L. F. Nr. 64:

O. scapo ancipiti, racemo secundo, bracteis herbaceis linearibus acuminatis ovario duplo brevioribus, sepalis petalisque ovatis acutis, labello acuto basi excavato dentibus duobus supra excavationem inflexis postice rotundato cordato, clinandrii lobis subintegris.

Wild in Guatemala?

This is known in gardens as a variety of O. pulchellum, than which it is smaller in all its parts, and from which it differs in the lip being quite acute, by no means hastate, nor almost truncate, and with an excavation at its base in lieu of the triple fleshy tubercle of O. pulchellum. Flowers pure white. Its native country is not certainly known.

79. ODONTOGLOSSUM ROSEUM Lindl. in Benth. Pl. Hartw. p. 151. L. F. Nr. 65:

O. foliis oblongo-lanceolatis racemo gracili duplo brevioribus, bracteis ovatis concavis subangulatis pedicellis duplo brevioribus, sepalis petalisque lanceolatis, labello trilobo basi bilamellato; lobis lateralibus nanis rotundatis intermedio obcuneato acuto, columna elongata apice alis 3 membranaceis integris aucta.

Wild in Peru; Quebrada de las Juntas; August—Hartweg.

Leaves from three to five inches long. Raceme about a span long. Flowers bright rose-colour, something less than an inch in diameter.

Species insufficiently known.

80. ODONTOGLOSSUM GHIESBREGHTIANUM Ach. Rich. in Annal. Sc., Jan. 1845 L. F. Nr. 67:

Pseudobulbis ovoideis compressis 3-phyllis; scapo pedali 3—6-floro; floribus luteis brunneo-maculatis: labello luteo, longe unguiculato, transverse orbiculari, emarginato, sepalis duplo longiori, ungue lineari basi hinc et illinc obtuse auriculato, superne bi-cristato.

Mexico.

Ad Odontoglossa porro judice Rchb. fil. pertinent haec genera:

Aspasia *Lindl.*

Gen. et Sp. Orch. p. 139.

Rchb. fil. Xen. I. pag. 82:

Genus Odontoglosso perquam affine: sepalis lateralibus ima cum labelli ungue coalitis (labelli ungue cum gynostemii parte inferiori extabulata connato), anthera per verticem tumore longitudinali connectivi (nunc et antice gibbere tumido) ornata, caudicula ligulata utrinque curvilinea.

Perigonium coriaceo carnosum. Sepala et tepala subaequalia (excepta A. epidendroide) lancea. Labelli unguis gynostemii marginibus anticis inferioribus adnatus, lamina plus minus pandurata nervis mediis basi incrassatis. Gynostemii pars libera clavata seu semiteres. Androclinium marginatum membrana humillima denticulata. Fovea magna subquadrata visco eleganter striolato. Pollinia pyriformia, postice fissa, plus minus cava sessilia in apice caudiculae linearis utrinque curvilineae. — Plantae habitu Miltoniarum pauciflorarum pseudobulbis valde compressis, floribus odoris, viscidis.

Clavis generis ex Rchb. fil. l. c.

A. Labellum basi quam antice manifeste angustius, panduratum *). (Pedunculus longe exsertus).	*A. lyrata* Rchb. fil.
B. Labellum basi aequale seu latius.	
§. 1. Sepalum dorsale et tepala prope libera. Sepala extus supra nervum medium manifeste carinata	*A. lunata* Lindl.
§. 2. Sepalum dorsale et tepala dorso gynostemii basi manifeste adnata. Sepala extus supra nervum medium ecarinata	
Sepala lanceolata:	
tumores velutini in basi labelli gemini . .	*A. variegata* Lindl.
tumores velutini in basi labelli nulli	*A. Biberiana* Rchb. fil.
Sepala oblongo ligulata:	
labellum sepalis lateralibus brevius obovatum	*A. epidendroides* Lindl.
labellum sepalis lateralibus aequale obtuse quadratum	*A. principissa* Rchb fil.

81. **ODONTOGLOSSUM LUNATUM.** Hue.: Rchb. fil. Xen. I. p. 82: A. *lunata* Lindl. Bot. Reg. XXII. 1836. sub 1907:

Sepalis tepalisque lanceis acutis, subaequalibus, labello pandurato.

Xen. p. 85:

Sepalo dorsali ac tepalis a gynostemio subliberis, sepalis nervo medio extus manifeste carinatis, sepalis tepalisque lanceis acutis subaequalibus, labello pandurato.

Aspasia lunata Lindl. Bot. Reg. XXII. 1836. sub 1907. XXX. 1840 Misc. 49. Lindl. (Paxt.) Fl. Gard I. p. 155. Xyl. 74. Rchb. Orch. Eur. Tab. 3.

Trophianthes zonatus Scheidweiler in Otto und Dietrich Allg. Gartenzeitung 1844. Nr. 28. p. 218.

Miltonia odorata Hort.

Aspasia epidendroides Hort. plurim. pertinacissime.

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*) Character omnino insufficiens ad divellendum genus: sed cum de specie prope nihil compertum habeamus dira necessitate adiatus.

Rhizoma vaginis ovatis acutis persistentibus bene squamatum. Squamae in caulibus secundariis in folia ligulata acuta fultientia abeuntes quaterna, quinterna. Pseudobulbus ovatus seu oblongus, valde compressus, bene anceps (ubi vetustus costatus, qui character nil valet, nisi de juvene pseudobulbo agitur) uni- — diphyllus. Folia illis aequalia papyracea. Racemus uni — seu biflorus ex axillis foliorum stipantium, vulgo tamen solitarius, et pseudobulbo quidem non evoluto. Pedunculus obtusissime trigonus. Bracteae triangulae acuminatae carinatae ovario pedicellato multo breviores. Ovarium pedicellatum bene trigonum, viscosum. Sepala lineari lanceolata acuminata et dorso quidem supra nervum medium egregie carinata, carnoso pergamenea, viridia seu flaveola maculis lituris que transversis violaceopurpureis, intus excepto apice picta; nunc cum tepalis stellata, nunc lateralia labello supposita; nunc labello subaequalia, nunc Brassiarum more adeo extensa, ut novam speciem videre putares. Tepala contextu, ambitu, colore aequalia, subbreviora, dorso ecarinata. Labellum panduratum antice bilobum, antrorsum dilatatum, minute denticulatum, angulis lateralibus gynostemii anticis adeo adnatum, ut limbo libero alae instar utrinque descendat, nervi medii ante basin paulo elevati; color albus fascia semilunari continua seu interrupta seu panduraeformi violacea, purpureave in disco. Gynostemii clavati androclinium membranula crassa denticulata marginatum. Antherae gibber in hac valde evolutus. — Brasilia.

Huc: *Trophianthès* Scheidw. in Allg. Gtstg. 1844. N. 28. p. 218:

Perigonii patentis foliola libera subaequalia, lanceolata, carinata. Labellum indivisum cum columna connatum. Columna erecta rostello fisso. Anthera —. Pollinia duo oblonga postice sulcata, glandula hamata. Ovarium arcuatum, triangulatum, antice canaliculatum.

Trophianthes zonatus Scheidw. l. c.:

Pseudobulbi caulescentes oblongi, compressi, vaginati. Scapus brevissimus vaginatus axillaris uniflorus. Sepala lateralia recta, supremum naviculare apice triangulare, petala recurvata.

Labelli margines ad medium inflexi, lobus transversus emarginatus. Folia 3—4 pollices longa, 1 pollicem lata. Petala et sepala carnosa pallide viridia usque ad medium sanguineo maculata. Labellum candidum in medio roseo-zonatum. Stigma purpureum. — Patria Brasilia.

Lindl. Bot. Reg. XXII. 1836. sub 1907: *Aspasia lunata* Lindl.

Pseudobulbis oblongis compressis laevibus, sepalis petalisque linearibus obtusis patentissimis, labelli lobis lateralibus nanis, intermedio plano subquadrato undulato, floribus solitariis.

Brasilia, on the Cedrela district of Bananal. Descourtilz.

Sepala et petala luteo-viridia, sanguineo-maculata. Labellum album, macula lunata in medio. Flores inodori.

A variety of it is mentioned by Descourtilz with a pale lilac lip, the stain on which is deep violet. He also represents the pollenmasses as each furnished with a separate caudicula. If this is correct it will be an additional measure for doubting how far that character is of importance is distinguishing genera.

Bot. Reg. XXXII. 1844. Misc. 49:

We have received this curious Brazilian epiphyte from J. C. Lyons, Esq. of Ladistea near Mullinger, by whom it was obtained from the country about Rio. It has exactly the structure of the other Aspasias, and not a double caudicula, as appeared from the drawing of Mr Descourtilz, on which the species was founded. The flowers have long, narrowed sepals and petals yellowish blotched with brown; the lip is large and white, and is stained in the middle with pale purple, which had not, in the specimens sent us, that distinct crescent form from which the name has been derived. The anther has a large tumor in front, and a serrated sharp ridged crest, which gives the column much the appearance of a parrots head.

Hotul. Rchb. fil.:

Gynostemium ad medium cum labello connatum semiteres, cristae binae externae labelli baseos labelli ad margines gynostemii decurrentes. Androclinium marginatum membranaceum, subdenticulatum. Labelli trilobi margines crenulati, cristis 4 in medio, lobis lateralibus rotundatis, medio trapezoideo obtusangulo transverso antice emarginato. Anthera antice gibbosa, crista denticulata super antheram ipsam cavum gibbus (est plane cellulosa).

Rio Janeiro Binns. Flor. apud Hoffgg. Maj. 46.

82. ODONTOGLOSSUM VARIEGATUM. Huc: Rchb. fil. Xen. I, p. 88: *A. variegata* Ldl Bot. Reg. Tab. 1907:

Sepalis lanceolatis acutis, tepalis cuneato oblongis; labello basin versus obtuse trilobo, lobis obtusis crispulis lobulatis, lobo medio producto, tumoribus velutinis geminis in basi.

Hook. Bot. Mag. XII. N. S. 3679. *Aspasias interrupta* Hoffmgge. Verz. Orch. 1844 44. *Aspasias liturata* Link! in iconib. horti Schoeneb.!

Pseudobulbi ovati oblongive. Folia oblongo lanceolata supra pseudobulbos gemina. Pedunculi obtusissime trigoni uni- triflori. Bracteae triangulae carinatae ovario trigono multo breviores. Sepala lineari lancea, lateralis paulo longiora, viridula seu flaveola lineolis atropurpureis atroviolaceisve interruptis notata. Tepala cuneata ligulata apicem versus dilatata, apice acuta venis omnibus atroviolaceo pictis. Labellum supra basin gynostemio adnatum, trilobum; lobi laterales obtusanguli divaricati undulati, lobus medius semiovatus undulatus nunc bilobulus, nunc integer; discus subvelutinus; calli gemini velutini in basi, in carinulas exeuntes (ad vivam!) sulco interjecto; candidum, basi flaveolum purpureo guttulatum; nervi plurimi violaceopurpurei. Gynostemium clavatum, antice canaliculatum, velutinum; fovea semioblonga. Anthera pyriformis, vertice carinata. Vulgo floret pseudobulbo evoluto.

Primum in hortos Anglorum ex hortis Trinitatis insulae advecta. — Guyana Rob. Schomburgk 425! ibid. Pirara Rich. Schomburgk! Surinam Kegel! Ex ditione fluminensi Brasiliae (Rio Janeiro) nuper magna copia in hortos Hamburgensium allata.

83. ODONTOGLOSSUM BIBERIANUM. Huc: Rchb. fil. Xen. I. p. 88: *Aspasia Biberiana* Rchb. fil. in Seemann Bonpl. II. 1. April 1854. 90:

Recedit a praecedenti labello profundius inserto aequaliter pandurato, basi et apice aequilato, tumoribus velutinis in basi deficientibus, nervis quaternis mediis basi carinatis. — Uniflora (an semper?).

Perigonium quam in praecedenti duplo triplove majus; viride unicolor excepto labello flavo concolori. Sepala oblongolanceolata; tepala cuneata oblonga acutiuscula. Labellum oblongo quadratum obtusangulum, apice profunde emarginatum, margine denticulatum. Praeter cristulas quaternas venae radiantes superadditae Gynostemium rectum clavatum; margo androclinii leviter membranaceus, postice apiculatus. Angulus in basi gynostemii valde prominulus. — Dicata domino Biber, mercatori Hamburgensi ac Paraënsi, de Orchideis introducendis in hortos nostros optime merito.

Ex ditione Paraënsi.

84. ODONTOGLOSSUM ASPASIA. Huc: Rchb. fil. Xen. I. p. 88: *Aspasia epidendroides* Lindl. n. et Sp. Orch. 139:

Sepalis oblongo ligulatis obtuse acutis, tepalis latioribus obtusioribus concavis, labello sepalis lateralibus breviori obovato (nunc quadrilobulo), crenulato, tumoribus velutinis in basi nullis. B. Mag. 3962.

Pseudobulbus saepe exacte circularis valde anceps et valde compressus, nunc ligulatus(!). Folia oblongo ligulata — et fultientia quoque optime evoluta. Pedunculus quam in reliquis (excepta *A. lyrata* Rchb. fil.) longior, pluriflorus (racemum undecimvaginatum tenemus). Bracteae ovatae acutae brevissimae; flores sicci nunc occurrunt cinnabarini more Brassiarum quarundam Miltoniarumque. Carinae in labelli

basi quaternae. Ex colore floris duos — si placebit — habébis typos: altera pollet sepalis extus atroviolaceis, viridi irroratis, intus olivaceoviridibus, obscure atroviolaceo fasciato maculatis: tepalis concoloribus violaceis; labelli candidi disco purpureoviolaceo. Altera contra — et vulgo quidem minor — multo pallidior, tepalis pallidissime lilacinis, demum sordide flavidis. Haec nobis omnino videtur: *Aspasia fragrans* Klotzsch Ind. Semin. Berol. 1853. 12. Addimus quidem descriptionem ill. viri, sed eheu! ne vestigium quidem characteris reperimus, quod forsan ipsi ill. fautori accidit, qui alias diagnosin non omisisset. Hanc varietatem obtinuimus ex hortis. — Vulgo floret pseudobulbo evoluto.

Crescit in America vere centrali: Veraguas: Hinds! Costa Rica, Veraguas, Guatemala, Chiriqui (ubi vulgatissima 2000' Novembri) J. v. Warscewicz! Ex Nicaragua attulerunt in hortum schol. Med. Parisiensem. S. Baranka Costaricae Oersted!

Obs. En descriptio Klotzschiana Aspasiae fragrantis ex l. l. recepta:

„Pseudobulbis oblongis valde compressis sulcatis ancipitibus, apice emarginatis, diphyllis; foliis lanceolatis acuminatis papyraceis, basi conduplicatis, apice latiuscule recurvis, dorso longitudinaliter angustě carinatis; racemo brevi basilari trifloro; perigonii foliolis exterioribus luteis, maculis sordide fuscescentibus pallidis magnis dense fasciatis, dorsali patenti erecto apice bidentato*), lateralibus revolutis, interioribus dilutissime lilacinis, deinde sordide flavidis, oblongis, dorso convexis, cucullato-acutis erectis subbrevioribus; labello subintegro cordato-ovato obtuso candido violaceo-maculato, versus apicem denticulato, basi utrinque rectangulo, taeniis geminis integris a basi usque ad medium; gynostemio recto robusto sordide albido demum flavido."

„Pseudobulbus valde compressus, 2½ pollices longus, 16 lineas latus. Folia papyracea, inaequilonga, minora 5½ pollices longa, 15 lineas lata, majora 8 pollices longa et 11½ pollices lata. Racemus crassitudine pennae columbinae, 2½ pollices longus. Perigonii foliola subaequalia, 10 lineas longa, 3—4 lineas lata. Labellum 7 lineas longum, ad basin 7, versus apicem 5—6 lineas latum.

„Patria? Floruit in horto botanico Berolinensi M. Junio 1853."

85. ODONTOGLOSSUM PRINCIPISSA. Huc: Rchb. fil. Xen. I. p. 84: *Aspasia principissa* Rchb. fil. in v. Mohl und v. Schlechtend. Bot. Ztg. X. 1852. 637.

Priori affinis, omnium maxima, labello obtuse quadrato apice bilobulo, sepalis lateralibus aequilongo, gynostemio arcuato gracillimo.

Habitus et organa vegetativa praecedentis. Sepala et tepala carneo brunnea; labellum flavum striis radiantibus brunneis; umbo in gynostemii basi magnus; carinae labelli geminae in basi valde elevatae.

Veraguas Maio et Junio rarissima. J. de Warscewicz! (Habeo spec. sicc.). (Dicitur exstare in horto Allardt Berol.)

Species obscura, egregia.

86. ODONTOGLOSSUM LYRATUM. Huc: Rchb. fil. Xen. I. p. 84: *Aspasia lyrata* Rchb. fil. l. c. 721:

Pedunculo tenui supra folia obovato ligulata longe exserto, labello panduraeformi basi quam antice multo angustiore, obtuse acuto.

Epidendrum lyratum Fl. Flum. IX. 37. (1827).

Icon profert pseudobulbos pyriformes apice bene angustatos (costatos?), fere quinque pollices longos, supra basin duos latos; diphyllos; folia subaequilonga. Pedunculus ultra pedalis. Perigonium illi A. lunatae duplo minus. Sepala et tepala aequalia lanceolata acuta, intus et extus basi zonulis quibusdam obscuris notata.

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*) Quod certe aut monstrose, aut adeo minute, ut vix commemorande dignum.

87. ODONTOGLOSSUM COCHLIODA. Huc: *Cochlioda* Lindl. Fol. I. „Feb. 21. 1853."

Sepala petaloidea, patentissima, libera; lateralibus angustioribus labello suppositis. Petala tenera, patentissima, sepalo dorsali aequalia. Labellum tenerum, 3-partitum, ad medium usque columnae connatum, decurrens: callis 2 linearibus apice verticaliter bivalvibus (cochleae ad instar) sub anthera. Columna arcuata, elongata, apice auriculata; clinandrio cucullato. Pollinia 2, oblonga, solida; caudicula rhombeo-ovali; glandula oblonga parum majore. Herba epiphyta, Peruviana, pseudobulbosa. Folia coriacea. Racemus radicalis, densiflorus; pedunculo squamato, bracteis glumaceis. Flores conspicui.

The habit of this plant is that of Odontoglossum; the lip and column would refer it to Epidendrum: the pollen-masses and caudicle are such as we find in no neighbouring genus. The calli on the lip, placed just in front of the anther, are narrow, raised, and fleshy, and each is furnished at the point with a bivalve gland which opens vertically. The two narrow lateral sepals, standing apart from the others and beneath the lip, indicate an unmistakeable affinity with Oncidium.

Cochlioda densiflora.

Wild in Peru—Matthews.

Pseudobulb oval, two-edged, something like that of Oncidium tenue, with one narrow coriaceous spreading leaf at the point, and a pair of smaller and more channelled ones at the base. Peduncle about as thick as a crowquill, five inches long before reaching the flowers, clothed through its entire length with close-pressed glumaceous sheaths. Raceme oblong, rather more than three inches long. Bracts glumaceous, cucullate, spreading, about as long as the ovary. Back sepals and petals roundish, acute, of the same size; lateral sepals spathulate-oblong, acute, nearly parallel. Lip three-lobed; lateral lobes roundish, middle one linear-oblong, dilated and two-lobed at the point. In their dried state the flowers are about one inch and a quarter across; their colour is unknown; it seems to have been yellowish, or white, and unspotted.

Huc porro: GOMEZA R. Br. Bot. Mag. 1748.

88. ODONTOGLOSSUM RECURVUM. Huc: *Gomeza recurva* R. Br. Bot. Mag. 1748. *Rodriguezia recurva* Lindl. Hort. Trans. VII. 67. L. O. 195.

89. ODONTOGLOSSUM PLANIFOLIUM. Huc: *Gomeza planifolia* Klotzsch Rchb. fil. in v. Schl. und v. Mohl Bot. Ztg. 1852. 772.

90. ODONTOGLOSSUM LAXIFLORUM. Huc: *Gomeza laxiflora* Klotzsch Rchb. fil. l. c. *Rodriguezia laxiflora* Lindl. Bot. Reg. XXV. 1837. Misc. 139.

Pseudobulbis ancipitibus ovalibus, foliis lineari-lanceolatis acutissimis, racemo laxo cernuo, bracteis ovaria subaequantibus, labelli recurvi obsolete bicristati appendice ungui aequali, sepalo antico angusto cuneato bifido postico petalisque planis.

I received it 1834 from Mr. Bateman, who first distinguished it from R. planifolia and recurva. Organ mountains of Brazil Gardner 654. Recently in the coll. of Loddiges. Phlegreen flowered. Much smaller than those just mentioned, with a very lax nodding spike, on which the flowers are generally arranged at considerable intervals, not always however, for I have spec. with the inflorescence as compact as that of R. secunda.

91. ODONTOGLOSSUM CRISPATULUM. Huc: *Gomeza crispa* Klotzsch Rchb. fil. l. c. Huc: *Rodriguezia crispa* Lindl. Bot. Reg. XXV. 1839. Misc. 129:

Sepalis omnibus liberis petalisque undulato-crispis, labelli bicristati appendice ungue multo breviore.

This is the finest of the green flowered species and is remarkable for the crisp appearance of its flowers, which are sea green bordered with yellow. Their fragrance is delicious, resembling that of Primroses. Brazil.

Bot. Reg. XXVI. 1840. 54:

Pseudobulbis ovatis elongatis-compressis, diphyllis, foliis oblongo-lanceolatis patentibus undulatis, racemo elongato dorso pyramidato nutante.

Organ mountains.

Evidently near R. suaveolens, the Pleurothallis foliosa of Bot. Mag. t. 2746, a plant I have never seen. But according to the fig. and descript. the two lateral sepals of that species, are united at the base, and the flowers are very little crisped. — Perigonium viridi flavum.

92. ODONTOGLOSSUM FOLIOSUM. Huc: *Gomeza foliosa* Klotzsch Rchb. fil. l. c. *Rodriguezia suaveolens* Lindl. Orch. 195. *Pleurothallis foliosa* Hook. Bot. Mag. 2746.

93. ODONTOGLOSSUM BARKERI. Huc: *Rodriguezia Barkeri* Hook. Bot. Mag. 3497:

Bulbis ancipitibus compressis oblongis, foliis linearilanceolatis enerviis laevibus, perianthio undulato, sepalo inferiori (duobus formato) fere ad medium bifido, segmentis patentibus, labello apice integro.

A Brazilian plant, imported from Brazil by George Barker, Esq. of Birmingham, and communicated to us in full flower Jan. 36 by Mr. Cameron of the Birmingham Bot Garden. — It is in many respects allied to the Gomeza (*Rodriguesia* Lindl.) recurva of Bot. Mag. t. 1748, and to the plant of the same name in Bot. Cab. t. 660. (*Rodriguesia planifolia* Lindl.). From the former it differs in the smooth, not striated and plaited leaves; and from both, as well as from *R. suaveolens* Lindl. (*Pleuroth. foliosa* Hook. B. M. 2746) by the very deep division and consequently long segments, which are spreading, of the lower (combined) sepal. The whole flower too, is of a uniforme pale green colour, nearly destitute of fragrance.

1466.½. BRACHTIA *Rchb. fil.*

Linnaea XXII. 853. Walp. Ann. III. p. 561.

Rchb. fil. Bonpl. II. 14:

Perigonium carnosum, clausum; sepala oblongolanceolata acuta, dorso longitudinaliter carinata, tepala ovata acuta ecarinata. Labellum obovatum seu panduratum, retusiusculum seu bilobulum, basi excavatum, carinulatum callis carnosis carinatis duobus a basi medium usque, antice et basi liberrimis, medio connatis (uti x littera), gynostemio brevi semitereti antice canaliculato, in pedem alatum producto, basi cum sepalorum tepalorumque basi connato, cum labello apici gynostemii parallelo arthrosi nec articulatione junctum, rostellari processu bidentato porrecto, fovea stigmatica supposita parva. Anthera mitrata, dorso carinata. Pollinia globosa postice sulcata, in lamina oblonga sessilia (ad B. glumaceam).

Diess Alles nach neuen Blüthen der B. glumacea, nur die Anthere und Pollinia entlehne ich meiner früheren Zeichnung. Eigenthümlich erscheint mir vor Allem die Vereinigung der Hüllblätter und Säule am Grunde. Der Fruchtknoten erweitert sich also in einen kegelförmigen Körper von etwa ½ Linie Länge, dann werden die Organe frei. Das Mentum führt die Gattung den Maxillarien zu, die Tracht ist die einer Brassia. Herr Wagener hat die sogenannte Brassia pumila bei Herrn Linden gesehen und versichert, die Aehnlichkeit der Pflanzen wäre gross.

Rchb. fil. Xen. I. p. 114:

Genus Mesospinidio quodammodo affine, nec Brassiae admodum alienum labello basi gutturoso, sepalis lateralibus basi connatis saccatis suppositis, gynostemii processu rostellari canaliformi, polliniis pyriformibus cavis postice fissis in caudicula curvata.

Perigonium carnosum clausum. Sepala subaequalia, lanceolata, carinata, lateralia basi connata, gibberem efformantia. Tepala subaequalia, tamen extus non carinata et latiora. Labellum a basi angustiori ovatum apiculatum, carnosum, basi saccatum, disco calloso; ante basin utrinque gynostemio accretum. Gynostemium crassum utrinque membranaceum marginatum. Androclinium ascendens, bicameratum. Rostellum utrinque retusum; medio lamina canaliculata, vexillo quasi, auctum pro caudicula recipienda. Anthera dorso carinato cristata ovata apice apiculata. Pollinia pyriformia, cava, postice fissa, sessilia in caudicula curvula oblongo-quadrata, seu cordata, basi glandulam triangulam seu oblongam gerente. Fovea subquadrata transversa, basi limbo prominulo angulato cincta.

1. BRACHTIA GLUMACEA. Rchb. fil. Linn. l. c. Walp. l. c. Rchb. fil. Bonpl. II. 14: Humilis, pseudobulbis ancipitibus oblongis monophyllis, foliis oblongis apice obtuso inaequalibus vernixiis, 4—5 pollices longis, foliis stipantibus inferioribus squamaeformibus, superioribus illis subaequalibus, pedunculo infrabulbi 4—5 pollicari, ex folio stipante axillari, erecto, foliis breviore nunc aequali, longiori, paucifloro, medio univaginato, apice flexuoso spicato, bracteis ovatis acutis scariosis glumaceis flores subaequantibus, labello apice obtuso. Die röthlichgelben Blüthen im getrockneten Zustand halb so gross als die eines lebenden Scelochilus Ottonis. Die Tepala doppelt so breit als Sepala. Merida. (*Oncodia glumacea* Lindl. Fol.). Wagener.

Huc: *Oncodia* Lindl. Fol. I. Part. IV. April 1853:

Sepala erecta, costata, herbacea: lateralibus paulo obliquis, ovarii mento adnatis. Petala membranacea, latiora. Labellum membranaceum, indivisum, erectum, cum cavitate carnosa in ovarii apice mentiformi continuum, basi foveatum et bilamellatum. Columna brevis, erecta, aptera; margine membranaceo versus basin latiore. Ovarium ad columnae labellique junctionem in cavitatem carnosam mentiformem (cuniculum) dilatatum. Pollinia 2, ovalia, solida; caudicula lata lineari; glandula oblonga. Anthera apiculo recurvo. Herba epiphyta, Americae tropicae, pseudobulbosa. Folia coriacea. Racemi radicales. Bracteae glumaceae.

In habit this resembles somewhat such plants as Brassia glumacea; but in structure it is extremely different. The small flowers, hidden within the bracts, have an anterior hollow tumour, like a goitre, arising from the top of the ovary, and answering to the cuniculus so common in Epidendrum. On the edge of the cavity of this tumour stand the lip and the pair of lateral sepals, which are widened on one side at the base so as to accomodate themselves to the form of the tumour. The column is exactly that of Brassia, to which the genus is nearly related.

Oncodia glumacea Lindl. Fol. l. c.

Wild in New-Granada—Funck and Schlim. 1499.

Pseudobulb narrow, two-edged, one-leaved. Leaf coriaceous, somewhat shining, linear-oblong, obtuse, channelled at the base and greatly narrowed. Peduncle erect, about as long as the leaf, terete, with an adpressed sheath near the middle, and another half way between it and the spike. The latter short, distichous, imbricated, with cucullate blunt glumaceous bracts, which are longer than the flowers. The sepals are narrowly triangular, with a sharp central rib. Petals twice as broad, roundish oblong, apiculate. Lip of the same form as the petals, with a pair of deep stout diverging plates near the base, between which, next the cavity or chin, is a small pit clothed with hairs.

Rchb. fil. Xenia I. p. 76. Tab. 29. II. 1—12:

Bracteis ovatis acutis, labello antice ovali apiculato disco calloso depresso quadrato unoquoque margine sinuato, postice velutino.

Planta statura valde varians: tripollicaris — ultra pedalis. Pseudobulbi ancipites oblongi monophylli. Folia oblongo ligulata apice obtuso inaequalia, vernixia, 3—5 pollices longa, nunc pedalia. Folia stipantia inferiora squamaeformia, vaginarum margine tenui membranaceo eleganter transverse plicatulo. Pedunculus infrabulbis nunc subnudus, nunc plurivaginatus. Vaginae scariosae ancipites apice acutae. Bracteae scariosae ovatae acutae cucullatae flores erectos (in sicca) cinnamomeos subaequantes. Perigonium supra descriptum, bene carnosum. Labellum margine nunc crenulatum, apice apiculatum. v. Warscewicz.

2. BRACHTIA SULPHUREA Rchb. fil. in Seemann Bonpl. II. 1854. 14:

Pseudobulbis ovatis ancipitibus, foliis oblongolanceolatis acutis summis subpedalibus, pedunculo gracilento subpedali trivaginato, apice spicato multifloro, inflexo, bracteis lanceolatis acutis floribus sulphureis longioribus, labello apice acuto.

Merida 5000'. Jan. 1853. Wagener.

Rchb. fil. Xenia I. p. 75. Tab. 29. I.

3. BRACHTIA ANDINA Rchb. fil. Bonplandia IV. 322.

1466a/. MESOSPINIDIUM Rchb. fil.

In v. Mohl und v. Schlechtendal Bot. Ztg. X. 1852. p. 929.

Rchb. fil. Xenia Orchid. I. 36:

Genus Odontoglossum Hb. B. Kth. inter et Brachtiam Rchb. fil. (Oncodiam Lindl.): ab utroque valde diversum rostello, limbo androclinii descendente, labello, mento spurio, gynostemio antice foveato, pollinario.

Perigonium subcarnosum, clausum. Sepalum summum lanceolatum, sepala lateralia connata, apice bifida, lacinia utraque lancea, basi subsaccata, labello, supposita; tepala triangulo lanceolata acuta, sepalis basi vix imbricantibus. Labellum cuneatum obcordatum limbo revoluto, carinae duae unguem marginantes eboraceae nunc antice lobatae canalem velutinum inter se linquentes, lamella biloba depressa anteposita; subimmobile. Gynostemium semiteres, antice profunde excavatum. Androclinii limbus utrinque descendens, rostellum ascendens acuto triangulum bicuspidatum. Anthera depresso mitrata uniloculāris antice retusa medio cuspidata. Pollinia globosa, postice minute perforata. Caudicula linearis basi latior; glandula lancea.

1. MESOSPINIDIUM WARSCEWICZII Rchb. fil. Xen. I. Tab. 16. I, 1—11. et l. c.:

Planta satis mira ob mentum spurium. Gynostemium enim in pedem non est productum, unde de vero mento sermo non fieri potest. Sed cum latera illius organi sint omnino protracta, effectus est idem ut perigonii phylla lateralia externa non sint super ovarium ipsum sed pone illud inserta. Folium basi breviter cuneatum oblongo lanceolatum acutum pergameneum. Flores illis *Oncidii umbrosi* Rchb. fil. subaequales, olivacei, purpureo guttati. Labelli cuneus albidus, limbus flaveolus purpureo guttulatus, lamella biloba flaveola. — Habitus Odontoglossorum e Sect. Myanthiorum fid. Equite Kramer.

2. MESOSPINIDIUM RADIATUM Rchb. fil. Mss. *Abola* Lindl. Fol. I. April 1853:

Sepala subcoriacea, patentia; lateralibus connatis, labello suppositis. Petala membranacea, conformia. Labellum liberum, sessile, columnam amplectens, basi dilatatum, indivisum, membranaceum; calle triplici

carnoso. Columna nana, membranaceo-marginata; clinandrio marginato. Pollinia 2, oblonga; caudicula brevi, tenui; glandula minuta. Anthera subrotunda, ecristata. Herba epiphyta, Americae tropicae, ebulbis, acaulis. Folia pauca, coriacea. Flores parvi, racemosi; pedunculo radicali.

This curious little plant must be regarded as an ally of Oncidium and Odontoglossum, from both which, as well as their allies Brassia and Miltonia, it is distinguished by an extremely slender, delicate caudicle, minute circular gland, and solid pollen-masses. The column too forces down the sessile lip by its thin projecting edges, which thus rest upon the lip and partially surround the calli.

***Abola radiata* Lindl. Fol. l. c.:**

Wild in Neu-Granada; in the province of Pamplona, at the height of 9500 feet; Schlim, 111.

The whole plant about five inches high. Leaves coriaceous, channelled, sessile, the uppermost not half the length of the raceme and perfect, the next imperfect, the remainder merely cartilaginous scales, from among which rises the scape, consisting of seven or eight small distant flowers seated on a flexuose rachis, with short cucullate striated acute bracts. The sepals seem to be rather coriaceous; the lateral separate only at the point. Petals linear-ovate, acute. Lip circular at the base, then contracted into a linear retuse upper half. Of the triple callus the middle is erect, the sides smaller and projecting. („Flowers brown with yellow rays. Column and lip white.“ — Schlim.)

3. MESOSPINIDIUM AURANTIACUM Rchb. fil. Mss. *Ada* Lindl. Fol. I. Febr. 1851:

Perianthium clausum, apice patulum. Sepala subaequalia, acuminata; lateralibus basi paulo obliquis. Petala conformia breviora. Labellum elongatum, indivisum, c. columna parallelum, eique basi adnatum; lamellis 2, membranaceis, in appendicem linearem truncatum connatis. Columna aptera, caeterum Oncidii, basi convexum dilatatum et marginatum. Stigma excavatum. Pollinia 2, cereacea, postice sulcata; caudicula brevi, obovata; glandula circulari. Anthera Oncidii, ecristata. Herba epiphyta, Americae tropicae, habitu omnino Brassiae cujusdam glumaceae. Scapus bisquamatus. Spica cylindracea, simplex, bracteis membranaceis. Flores xanthini.

This is a remarkable plant, with brilliant orange-coloured flowers collected in a close raceme enveloped in thin cucullate membranous bracts, and never opening except at their point. The leaf is about six inches long, narrow, and channelled; rather shorter than the scape, which bears two distant membranous sheaths. Mr. Linden referred it to Brassia; from which, however, it differs in some important particulars: — 1, the lamellae of the lip are confluent and membranous; 2, the lip is parallel with the column and solidly united to the base of it; 3, the column is twice as long as in other Brassias, and thin-edged at the base; 4, the caudicle is short and obovate, while the gland is circular. For this reason I place it at the end of the glumaceous Brassias. Possibly it may be related to Rchb.'s genus Brachtia, a plant of which I have no knowledge.

Ada aurantiaca Lindl. Fol. l. c.:

Folium canaliculatum. Scapus longior bisquamatus. Bracteae cucullatae membranaceae ovariis subsessilibus multo longiores. Flores apice tantum patuli, sepalis petalisque lineari-lanceolatis acuminatis. Labellum lineari-lanceolatum acutissimum convexum columnae elongatae basi adnatum; lamellis membranaceis connatis apice truncatis acutis basi intus pubescentibus.

Wild in New-Granada; in the province of Pamplona, at the height of 8000 feet above the sea—Schlim. 121.

4. MESOSPINIDIUM CINNABARINUM Rchb. fil. Mss. Huc: *Brassia cinnabarina* Linden cf. supra sub Oncidiis p. 770.

5. MESOSPININIDIUM SANGUINEUM Rchb. fil. Mss.:

Pseudobulbo ovali compresso, diphyllo, folio uno stipante, foliis omnibus cuneato ligulatis acutis, racemo secundo (? semper), bracteis squamaeformibus minutis, sepalis oblongis acutis, lateralibus medium versus bifidis, tepalis cuneato ovato acutis, labello ligulato acuto, lateribus erectis, carina lineari per disci basin superiorem apice, sc. medio labello divergenti bicruri, androclinio minute lobulato.

Pseudobulbi viriduli punctis atropurpureis. Pedunculus et ovaria pedicellata violacea. Perigonia sanguinea, illis Rodriguezlae secundae aequalia.

Peru: Marannon Warscewicz! Quito. Jameson!

1466ᵃ/. SIGMATOSTALIX Rchb. fil.

In v. Mohl und v. Schl. B. Ztg. 1852. 769.

Perigonii phylla lanceolata acuta subaequalia. Labellum unguiculatum, dein semiellipticum, subito angulato-dilatatum, antice emarginatum, excavatulum, membrana semicirculari antice aperta, postice angulato inflexa in disco baseos semiellipticae, carina erecta trapezoidea superne sulcata longitudinali in media illa lunula. Gynostemium gracillimum sigmoideum, apice clavato in alas oblongas pone foveam stigmaticam productum. Androclinium elevatum, ascendens, subimmarginatum, antice angulatum, apice bidenticulatum, postice angulatum. Anthera mitrata. Pollinia duo oblonga, depressa. Caudicula —. Glandula —.

Planta habitu Odontoglossi cujusdam imminuti. Folia angustissime linearia, acuta. Pseudobulbi oblongi, apice attenuati, compressi. Pedunculi axillares in foliis pseudobulbos fulcientibus, basi nudi, apice 2—4-flori; capillares. Bracteae ochreatae, acutae, flores illos Pleurothallidis pictae vix attingentes.

Rchb. fil. Xen. I. p. 19:

Aff. Rodriguezíae gynostemio arcuato gracili apice utrinque producto oblongo auriculato, rostello triangulo bidentatulo ascendente, labello unguiculato basi gyroso calloso. Perigonii phylla lanceolata acuta subaequalia. Labellum unguiculatum dein utrinque humeratum angustum subito in trapezoideum obtusangulum antice emarginatum, antrorsum angustatum; excavatulum. Carinula hippocrepica in basi, interjecta carina sulcata; apiculo postico. Gynostemium gracillimum arcuatum apice clavato in auriculas oblongas pone foveam stigmaticam productum. Androclinium ascendens, subimmarginatum, postice apiculatum, rostellum triangulum, minute bidentatum. Anthera mitrata. Pollinia duo oblonga, depressa. Caudicula —. Glandula —.

1. SIGMATOSTALIX GRAMINEA Rchb. fil. l. c. *Specklinia graminea* Pöpp. Endl. I. 89. b. „1007. Stelideae. Cuchero Peruv. 1829. Pöppig." Blüthe scheint goldgelb, am Grunde braun. Ich hatte nur 2 reife Knospen zur Verfügung, glaube aber Alles

richtig gesehen zu haben, nur dass mir unter solchen Verhältnissen der Winkel fehlt, den die Lippe zur Säule macht. — Die Stellung der Pflanze im System ist mir zweifelhaft. Die Säule hat einige Verwandtschaft mit der gewisser Odontoglossa, das Androclinium wie bei Rodriguezia. Die genagelte Lippe ist in dieser Verwandtschaft selten. Immerhin konnte ich nur 2 Pollenmassen finden. — Die *Rodriguezia cochlearis* Lindl. scheint mir nach der Beschreibung als zweite Art hierher zu gehören. Ich finde sie nicht unter den Massen von Orchideen, die mir vorliegen.

Xenia I. Tab. 8. III. 11—17. p. 20:

Plantula tenuis, pusilla. Caulis primarius dense squamatus ac rhizophorus. Pseudobulbi lineari oblongi basi a vaginis foliorum delapsorum margine membranaceo undulatis stipati, apice monophylli. Laminae lineari lanceolatae acutae. Pedunculi capillares in axillis foliorum suppositorum, apice racemoso paniculati. Adsunt enim in spatharum axillis ramuli abbreviati tribracteati. Bracteae an omnes sint fertiles, an infima fatua, non dijudicabo, cum flores deciderint.

2. SIGMATOSTALIX PICTA:

Racemo pendulo, sepalis tepalisque oblongis acuminatis, labello ungue canaliculato in laminam transversam subreniformi triangularem obtusatam expanso, angulis posticis utrinque falcula introrsa ornatis, callo bicorni retrospectante, antice obtusato in basi hujus laminae, columna gracillima, apice dilatata, ima basi annulo prosilienti cincto, rostello elongato, lineari.

Flores pallidi purpureo picti. Tepala vulgo latiora quam sepala. Caudicula supra medium valde dilatata. Anthera antrorsum acuta. Quito. Jamieson.

3. SIGMATOSTALIX RADICANS:

Rhizomate valde radicante, pseudobulbis oblongoligulatis, foliis cuneato lineariligulatis acutis, geminis, foliis stipantibus 2—4, racemo elongato, usque undecimfloro, sepalis tepalisque cuneato oblongis acutis, labelli ungue tuberculis duobus deinceps positis onusto, lamina transversa sagittato ovato apice acuto uni-, bi-, trilobulata, callis triangulis 4—6 sex, uni-, seu biseriatis.

Flores viriduli flavidi. Columna antice valde violaceopurpurea. Brasilia. Rio grande. Porto Allegro.

1466¼. MEIRACYLLIUM *Rchb. fil.*

Xen. I. p. 12.

Novum genus Vandearum nulli affine, habitu quodammodo Sophronitidis, labello calceolato apiculato more Sarcochili inserto, gynostemii androclinio bivalvi ab omnibus longe diversum. — Perigonium subcarnosum clausum: sepalum summum lanceolatum obovatum acutum; sepala lateralia triangula acuta; tepala cuneato ovata acuta. Labellum calceolare, gynostemio linea semilunari accretum, supra basin utrinque unidentatum, apice attenuata acutum. Gynostemium teretiusculum obliquum; androclinium a dorso valva semicirculari nunc bilobula tectum, immersum, antice in rostellum lineare rostriforme apice obtusatum seu bidentatum productum; fovea stigmatica in pagina rostelli inferiori, basi sua sinu obtuse triangulo insiliente notatum. Anthera oblonga antice rostrato attenuata, retusa, bilocularis. Pollinarium —.

1. MEIRACYLLIUM TRINASUTUM Rchb. fil. l. c. et Tab. 6. II. 8—12:

Caulis primarius calamum anserinum prope crassus, tortus, vaginis hyalinis apice triangulis obscuro colore transverse vittatis, radices adventitias obtuse flexuosas undique promens. Caules secundarii brevissimi uno internodio constituti a vaginis plane

absconditi; cicatrix insertionis folii semilunata. Folia crassissima, prope circularia, marginata, sicca juniora bene nervosa cum nervulis transversis aeque validis; adulta contra crassissima, transverse rugosa, inferne cutis rhinocerontinae instar rugis sulcisque quaquaversis arata, sulcata, tesselata. Pedunculi brevissimi, crassi. (ancipites?) supra basin bene articulati, dein calloso excisi pro bracteis minutissimis acutis ac pedicellis recipiendis. Ovaria pedicellata perigoniis longiora. Flores supra descripti, verosimiliter lilacini.

1469. PHALAENOPSIS *Blume.*

Bijdr. 294. Tab. 44. Walp. Ann. I. 790. III. 561.

1. PHALAENOPSIS DELICIOSA Rchb. fil. Bonpl. II. 93:

Aff. P. equestri Rchb. fil. (roseae Lindl.): gracillima, pedunculo sexpollicari, floribus paulo minoribus, sepalis tepalisque ovatis obtusis subaequalibus, labelli trifidi segmentis lateralibus ligulatis, medio obtuse rhombeo, callo depresso antice bicorni seu forcipato in unguem lobi medii, gynostemio humili.

2. PHALAENOPSIS EQUESTRIS Rchb. fil. Linn. XXII. 864. Walp. Ann. III. 562. (sub *P. rosea* Lindl.) Lem. l. c. 288. G. Chron. 1848. 671. Fl. G. 173. Pl. 72.

3. PHALAENOPSIS INTERMEDIA Lindl. in Paxt. Fl. G. III. 163. c. xyl.:

Petalis lato rhombeis acutis, labelli lobis lateralibus cuneatis obtusangulis intermedio ovato apice bicirrhoso.

Flowers white and deep rose. Veitch & Co. Natural mule between P. amabilis and rosea. Agrees with former in foliage and in the tendrils of the lip; with the latter in colour, in the acuteness of its petals and in the peculiar form of the middle lobe of the lip. The short description will enable it to be easily reconised Axis of inflorescence deep brown rich purple, bearing flowers half way in the size between P. amabilis and rosea. Sepals pure white, concave, oblong acute. Petals much larger, lozenge shaped, acute, pure white with a few minute speckles at the base. Lip threelobed, lateral divisions erect, wedgeshaped, with rounded angles, violet with a few crimson spots and dots. The middle division ovate, deep crimson, with the point separated into two short tendrils. Crest at the junction of the lobes of the lip nearly square, depressed in the middle, deep yellow with crimson dots.

4. PHALAENOPSIS CORNU CERVI Bl. et Rchb. fil. in Otto Hamb. Gartenztg. 1860. 161. Lindl. Folia I. Febr. 1854: *Polychilos* Kuhl and Hasselt, Genera et Sp., Orchid. et Asclep. (1827):

Sepala explanata, carnosa, angusta, libera; lateralibus subfalcatis, leviter incurvis. Petala conformia, minora. Labellum posticum, unguiculatum, in disco foveatum, cum columna continuum, carnosum, complicatum, tripartitum, laciniis lateralibus apice runcinatis, terminali lunato apiculato. Appendix circa foveam membranaceus, semicyathiformis, 5-aristatus, dentibus duobus auctus: altero minore a latere columnae, antico cultrato. Columna erecta, elongata, semiteres, basi bituberculata, clinandrio proclivi, rostello elongato decurvo. Stigma oblongum, excavatum. Pollinia 2, cereacea, postice fissa; caudicula elongata, obovata; glandula ovali. Anthera . . . Herba epiphyta, Asiae tropicae, caulescens. Folia coriacea, disticha. Pedunculus lateralis, erectus, multiflorus; rachi alata.

A remarkable genus, with the habit of the winged Aerides, for which the name Dendrocolla may be retained, but with a different lip, the appendix of which is a much more complex organ, and with a long narrow column. Perhaps it ought to be combined with Phalaenopsis, the sole distinctions between which and Polychilos consist in the foveated lip and complicated appendix of the latter.

Polychilos cornu-cervi Kuhl and Hasselt, l. c.:

Wild in Java — on the west side, in the province of Bantam—K. and H., T. Lobb; Moulmein—Id.

A distichous-leaved plant, with coriaceous oblong leaves narrowed considerably to the base, where they are very fleshy. The peduncles, which are opposite the leaves and longer, terminate in a broad-winged toothed rachis, which is usually a little branched. The flowers are reddish yellow, not quite two inches across, a little speckled in lines with a deeper red. It appears that only two or three open at a time.

1470. TRICHOGLOTTIS *Bl.*

Bjdr. 359. Tab. 8.

1. TRICHOGLOTTIS PUSILLA Rchb. fil. in Seemann Bonpl. V. 39. Huc: *Vanda pusilla* Tijsm. Binnend. Naturk. Tidschr. Ned. Ind. 1853:

Foliis oblongis carnosis canaliculatis apicibus obliquo-acutis, racemis bifloris foliis longioribus, phyllis perigonii exterioribus obovatis obtusis, interioribus angustioribus marginibus reflexis, labello obovato carnoso emarginato, columna supra stigma barbata, calcare obconico acutiusculo.

Salak.

2. TRICHOGLOTTIS CIRRHIFERA Tijm. Binnend. Naturk. Tidschr. Naad. Ind. V. 1853:

Caulibus pendulis, foliis carnosis, lanceolatis acuminatis subcirriferis undulatis subtus albido punctatis, floribus geminatis foliis oppositis, phyllis perigonii subaequalibus obovatis acutis, labello cornuto limbo obtusiusculo carnoso, calcare recto obconico. Salak.

1471. TELIPOGON *H. B. K.*

N. Gen. et Sp. I. 336. Walp. Ann. I. 790. III. 562.

1. TELIPOGON PAPILIO Rchb. fil. Warswz. Bonpl. II. 101:

Aff. T. obovato tepalis obtusangule rhombeis acutis, labello transverse obtusato rhombeo, tertia parte latiori.

Radices velatae longissimae, internodia caulis brevissima, foliorum vaginae tenues abbreviatae, latae; laminae a basi anguste cuneata dilatatae, apice angustiori apiculatae, margine vix microscopice denticulatae; pedunculus axillaris 2—7pollicaris, teretiusculus, apice racemosus, nunc flexuosus, 1—7-florus, bracteae triangulae acutae, inferne carinatae; ovaria pedicellata anguste triptera bracteas ter quaterve superantes; sepala anguste triangula, acuta, nervo medio extus carinata; tepala rhombea, apice acuta, lateralibus angulis obtusata, marginibus superioribus plus minus obtuse lobulata; nervi utrinque 6; labellum tertia parte latius, nec longius, transversum, utrique obtusatum, rhombeum, margine antico hinc lobulatum, nervis utrinque 12—13; nervi in basi velutini. Peru. v. Wrswz. — Wir zweifelten eine Weile, ob wir es mit *T. obovatus* Lindl. zu thun hätten; allein diesem werden „petala oblonga acuta", ein „labellum duplo majus obovatum rotundatum" zugeschrieben.

2. TELIPOGON FRITILLUM Rchb. fil. v. Wrswz. Bonpl. 101:

Sepalis triangulis, tepalis rotundato rhombeis magnis, labello transverso elliptico, undulatione introrsa utrinque trilobo.

Humilis, 3—5-pollicaris, radices adventitiae tenuissime velatae: folia a basi angusta oblonga, apiculata, margine minutissime denticulata; pedunculus rectus, teretiusculus, apice 1—5-florus, bracteae triangulae acutae, dorso carinatae, carinae alarum ad instar in pedunculo anguste descendentes; ovarium pedicellatum bractea quater —

sexies longius, latiuscule tripterum; sepala latius triangula acuta, trinervia nervis anastomosantibus; tepala magna, transverse rhombea, apiculata, margine superiore hinc lobulata, utrinque juxta nervum medium sexnervia, nervulis obliquis transversis basin versus; nervorum dorsum hinc minute velutinum; labellum plus duplo minus, transverse ellipticum, margine ciliatulum, utrinque pone apicem ex undulatione introrsa sinuatum, hinc quasi trilobum, nervi utrinque 10—11 radiantes, subcontigui microscopice velutini, discus pilosus. Ein Telipogon mit einer solchen Lippe ist unter den 6 beschriebenen Arten nicht anzutreffen. Blüthe so gross wie die des T. latifolius. Peru. v. Warscewicz.

3. TELIPOGON OBOVATUM Lindl. Bot. Reg. 1847. T. 27. adn. Cf. Walp. Ann. I. 790. Adde: Flower stem 6". Near T. latifolium, but its flowers are larger, and its lip instead of being shaped like the petals, is larger, quite round at the points.

4. TELIPOGON ANDICOLA Rchb. fil. Bonpl. III. 239:

Aff. T. tesselato Lindl. (quem non vidimus), pedunculo folia acuta excedente, racemo bi—plurifloro, bracteis triangulis carinatis, sepalis triangulis carinatis, tepalis cuneato obovatis obtuse acutis, labello subaequali.

Folia sicca papyraceopergamenealeareiligulata sursum dilatata acuta margine crispulo erosula duos prope pollices longa, duas tresve lineas lata, disticha, sicca superne favulosa, infimorum vaginae a radicibus adventitiis laxis funiformibus multum flexuosis perforatae. Pedunculus anceps apice racemosus, bi — quinqueflorus. Bracteae triangulae argute carinatae pedicellis tripteris bene breviores. Ovarium tripterum demum capsulam ovoideam rostratam tripteram efficiens. Perigonium tenue flavulum nervis purpureis (in sicco). Sepala anguste triangula supra nervum medium alato carinata duas pollicis tertias longa, basi duas lineas lata. Tepala cuneato obovata obtuse acuta, sex —septemnervia nervulis evanidis nullisve: maculae violaceae in ima basi papulis candidis introrsis hispida. Labellum subaequale apicem versus magis dilatatum obscure antice sinuato repandulum utrinque quadri—quinquenerve, nervulis extimis obliquis bene conspicuis — videtur obscure guttulatum fuisse; triangulum; in ima basi violaceo puberulum. Gynostemium humile bene hispidum atroviolaceum. Western side of Pichincha on trees at 10,000' of elev. 1848. 724. Jamieson.

5. TELIPOGON AUREUS Lindl. in Pl. Hartw. 1844. 150:

Foliis lineari oblongis scapo unifloro subaequalibus, bractea solitaria ovata cucullata, labello obovato rotundato petalisque cuspidatis venosis.

In montibus Loxa.

6. TELIPOGON TESSELLATUS Lindl. in Pl. Hartw. 1844. p. 150:

Foliis oblongis apiculatis scapo bifloro aequalibus, bracteis 2—3-ovatis acuminatis carinatis, labello subrotundo petalisque cuspidato tessellatis.

Prope las Juntas Peruviae.

7. TELIPOGON KLOTZSCHIANUS Rchb. fil. Linn. XXII. Walp. Ann. III. 562. 851. Bpl. II. 15:

Die starken langen Stämme dieser Pflanze tragen zweizeilige Blätter mit ganz kurzen, länglichen, spitzen Platten. Die Luftwurzeln sind unverhältnissmässig lang und dick. Die Inflorescenz scheint terminal, allein von der Achsel des zweituntern Blattes entwickelt sich dann der neue Spross, der mit einer ungeheuern Luftwurzel ausgerüstet den ältern überwächst. Caracas. 6000'. Juni. Wagener. — Walp. III. 562.

8. TELIPOGON FALCATUS Lind., Rchb. fil. Bonpl. II. 280:

Tepalis falcatis, labello cordato acuto.

Folia ensiformia utrinque attenuata apice acuta. Pedunculus anceps dense acuteque vaginatus. Flos speciosus illi Telipogonis latifolii paulo minor. Sepalum summum triangulum acutum per lineam mediam carinatum. Sepala lateralia latiora

subfalcata, dorsi nervo medio aeque carinata. Tepala lanceolato falcata, acuta, marginata. Labellum cordatum, cordiforme, acuminatum, papillis densis barbulatum. Gynostemium dense barbatum. — Sepala flaveola, tepala (sicca) violaceo irrorata. Labellum et gynostemium atroviolacea. — Neugranada: Provinz Pamplona bei La Baja. 9000'. Januar. Nr. 1192. Schlim.

9. TELIPOGÓN HAUSMANNIANUS Rchb. fil. in Bonpl. IX. p. 213: *T. latifolius* H. B. Kth. Lindl. in Orchid. Lind. p. 231. N. 122: both terrestre and epiphyte. Flowers large, golden yellow, petals faintly streaked with purpe. Violet hairs in the centre. The vast forests of Quindiu, province of Cauca 9840'. Los Volcanitos: Febr. 1843. N. 1285. Linden.

10. TELIPOGON ANGUSTIFOLIUS H. B. Kth. N. Gen. et Sp. I. 336. Lindl. Orch. Lind. 1846. p. 21. 23. N. 121:

Terrestre, at the entrance of the great Parano of Mucuchies, near the indian village of Chachôpo. Leaves fleshy, imbricated, abbreviate. Flowers pale yellow. Petals transparent, rayed with purple, pollenmasses sourrounded with violet hairs. Venezuela 10500'. N. 621.

11. TELIPOGON ASTROGLOSSUS Rchb. fil. Xen. I. Tab. 7. II. 12—19. p. 16:

Nulli affinis, tepalis ligulatis minute denticulatis, labello triangulo, acuto ante basin utrinque ligulato, dense papilloso velutino, fasciculis papillarum majorum 3 in disco, gynostemio utrinque fasciculo papillarum longarum extrorse barbato.

Plantula tenuissima, 2—4 pollicaris. Radices velatae obtuse flexuosae, tenues. Caulis internodia abbreviata. Vaginae membranaceae breves. Laminae lineari ligulatae acutae, basi paulo angustatae, margine tenuissime ac plane microscopice (apice praesertim) ciliolatae. Pedunculus terminalis filiformis, medio univaginatus, apice spicatus. Bracteae ovato triangulae ovario pedicellato filiformi quater breviores. Perigonium hyalinum minutissimum. Sepala ovata acuta. Tepala ligulata retusa, microscopice serrulata. Labellum a basi breviter cuneata trilobum, lobi laterales postici retrorsi ligulati, lobus medius a basi latiori oblongus, apice apiculatus tota superficie papulis valde velutina, excepto plano basilari medio (pro recipiendo gynostemio) et apiculo; fasciculi papillarum longarum acuminatarum terni, alter major ante apicem, minores extrorsi posteriores utroque latere. Gynostemium a basi constricta dilatatum. Androclinium immersum rostello mediano anguste triangulo ascendente. Fovea immersa stigmate quasi bilabiato, labium inferius rotundatum medio obtuse apiculatum limbo parce velutino. Fasciculus papillarum longarum in utroque latere extrorsus. Anthera cordiformis tenuissima. Pollinia quaterna oblongo compressa, externa minora; sessilia in caudiculae linearis basi dilatata rotundata. Glandula uncinata generis. Peru. Chachapoyas. Matthews.

1472. VANDA *RBr.*

In Bot. Reg. t. 506. L. O. p. 215. Bl. Rumphia IV. 48. — L. F. Aprili 1853:

Sepala explanata, omnia basi aequalia et angustata; saepius petaloidea. Petala sepalis conformia, saepius basi torta. Labellum basi saccatum vel calcaratum, cum basi columnae apodae continuum, carnosum, saepius sepalis multo brevius; subtrilobum aut integrum, ante calcar saepius callosum, auriculis nanis vel obsoletis. Columna crassa, nana, libera, apoda; clinandrio verticali. Stigma transversum; rostello obtuso vel retuso. Pollinia ceracea, plano-convexa, geminata, vel 2 alte bipartita; caudicula lorata aut cuneata, polliniis longior; glandula magna subrotunda vel triangulari. Anthera ovata, bilocularis, valvulis semiliberis.

Herbae epiphytae Asiae tropicae. Folia coriacea, disticha, apice obliqua. Flores saepius racemosi, conspicui. Pedunculi laterales.

The limits of this genus are very difficult to ascertain; they are here defined by a saccate or calcarate lip continuous with the column, a truncate rostellum, and two or four pollen-masses attached to a broad caudicle having a large circular gland. It is very near Luisia, which is better known by its habit than by any very satisfactory peculiarity of structure, except having a very short broad caudicle, and thin gland. Probably V. Lowei at least will hereafter be seperated, if other species agreeing with in its long drooping racemes and simple unguiculate lip should be discovered. The genus, as it now stands, may be divided into the following sections.

§. 1. *Fieldia.* Lip obscurely auriculate, incurved, entire, concave at the base, with a strong tooth at or above its middle, Pollen-masses four.

§. 2. *Euvanda.* Lip auriculate, straight, variously lobed, spurred, even or furrowed (usually with a tooth or callus in front of the spur).

§. 3. *Lamellaria.* Lip auriculate, straight, variously lobed or entire, spurred, bearing from one to three perpendicular plates.

§. 4. *Anota.* Lip without auricles, contracted and lobed at the point, spurred, with a pair of hairy elevated veins.

§. 5. *Cristatae.* Lip auriculate, straight or recurved, quite naked, saccate or excavated at the base.

Obs. §. 1. *Fieldiam* pro genere enumeramus infra! Rchb. fil.

§. 2. Euvanda Lindl. Fol.

1. VANDA TESSELLOIDES Rchb. fil, V. Roxburghii R. Brown in Bot. Reg. t. 506. L. O. 215. Bot. Mag. t. 2245. Van Houtte Fl. des Serres, Febr. 1846. Paxton's Flower Garden, t. 42. fig. 2. L. F. sub 4. (V. Roxburghii):

V. caule brevi crasso, foliis apice oblique tridentatis, racemis erectis foliis longioribus, sepalis petalisque oblongo-obovatis undulatis tessellatis obtusis, labelli lobo medio convexo ovalo emarginato obtusissimo canaliculato ante calcar obtuse calloso auriculis acuminatis columnae subaequalibus.

Vanda Jones in As. Researches IV. 302.
Cymbidium tesselloides Rox. fl. ind.. III. 463.

Wild on trees in many parts of Bengal, especially on the Mango—Roxb.

This fine species, the type of the genus, is readily known by its tesselated flowers and blue lip, the lateral lobes of which are sharp-pointed, and as long as the column.

2. VANDA CONCOLOR Blume Rumphia IV. p. 49. L. F. sub 5:

V. caule alto, foliis laxis membranaceis apice oblique tridentatis, racemis elongatis plurifloris, floribus distantibus, sepalis petalisque oblongo-obovatis unguiculatis undulatis unicoloribus obtusis, labelli lobo intermedio cuneato bilobo basi puberulo lineis elevatis, auriculis obtusis, calcare conico attenuato intus pubescente.

V. *furva* Bot. Reg. 1844. Misc. 42.
V. Roxburghii unicolor Hooker in Bot. Mag. t. 3416.

Wild in China—Loddiges.

According to Blume this is not the Angraecum furvum of Rumphius, but a distinct species. It has the habit of V. Roxburghii, but differs not only in whole colour of its sepals and petals, and the other characters above indicated, but also in being

a large lax-growing plant, five or six feet high, with much thinner and longer leaves. From the real Vanda furva it differs in the colour and form of the lip, in the attenuated spur, in the absence of a callus at the entrance of the latter, and in the total absence of the tesselation found in V. furva, as well as in V. Roxburghii.

3. VANDA FURVA Lindl. Orch. p. 215. Blume Rumphia IV. 48. t. 192. fig. 1 and t. 197. L. F. sub 6:

V. foliis canaliculatis rigidis apice oblique retusis, racemis erectis folio brevioribus laxis 3—5-floris, sepalis oblongo-obovatis, petalis unguiculatis obovatis falcatis aequilatis, labello patulo panduriformi glabro (?) apice rotundato emarginato plano lineis 5 elevatis, dente valido ante calcar obconicum obtusum auriculis obtusis ascendentibus.

Angraecum furvum Rumph. Herb. Amb., VI. t. 46. fig. 1.

Wild in the Moluccas and in Bima—Blume.

The figure in Blume's Rumphia, copied from an original in Professor Reinwardt's collection named Aerides bicolor, together with the details added by the former author seem to indicate that this is really a species distinct both from V. fuscoviridis and concolor, both which I have formerly supposed might be identified with it. The flowers are the size of V. Roxburghii, and grow in a few-flowered raceme much shorter than the leaves. The sepals and petals are of the same size, of a rich cinnamon colour distinctly tessellated; the petals are the same size as the sepals, but unguiculate and strongly falcate. The lip is rose coloured, apparently smooth, nearly oblong, with a shallow contraction below the round two-lobed point; at its base stands a stout tooth; its lateral lobes seem very short and blunt; the spur seems to be conical without attenuation. According to Blume it is called Angrek Kitsjil glap by the Malays.

4. VANDA INSIGNIS Blume Rumphia IV. p. 49, t. 192, fig. 2, and t. 197, b. Paxton's Flower Garden, t. 42, with a woodcut.

V. „foliis rigidis canaliculatis apice inaequali abscissis vel dentatis, racemis erectis folia adaequantibus laxis 5—7-floris, phyllis perigonii obovato-oblongis rectiusculis, labelli lobis lateralibus ascendentibus obtusis intermedio arrecto apice dilatato rotundato undulato ad basin subhastatam e tuberculo obtuso cum lineis 2 elevatis, calcare obconico obtuso."—Blume.

Wild on the mountains of Timor—Blume.

According to Blume's figure this would seem to be a very handsome species. The flowers are two and a half inches in diameter; green outside, brownish inside. The lip is pink, white at the base, with a singular gauffered surface if we are to trust his figure 192, but flat as in other Vandas judging from his figure 197. The name is frequent in collections, but I have never seen the plant alive, unless it was a specimen flowered by Mr. Knowles of Manchester, in which the lip was furnished with larger side lobes than in Blume's figure 197, but otherwise identical, especially in the concave not convex state of the lip, and the two elevated lines which run along its middle. The sepals and petals were dull yellow blotched with brown. The lip was white, with a faint shade of violet in the middle, and rich deep crimson streaks at the base. The flowers had a slight and agreeable fragrance, even when cut and kept in a sitting-room. See Paxton's Flower Garden, Nr. 341.

5. VANDA HINDSII Lindl. in Hook. Journ. Bot. 1844. II. 237. L. F. Nr. 8:

V. foliis arcuatis canaliculatis (pedalibus) apice oblique emarginatis et excisis, racemo horizontali laxo 10-floro foliorum longitudine, pedicellis floribus 3-plo longioribus, sepalis petalisque obovatis unguiculatis lobato-crispis, labelli cornu brevi obtuso lobo intermedio convexo cu-

neato apice rotundato bilineato ecalloso, lateralibus abbreviatis rotundatis hinc acutis explanatis, auriculis nanis.

Wild in the forests of Gew-Guinea—Hinds.

This has the habit of Vanda suavis, and its flowers seem to be of the same texture and size. Their colour cannot be judged of from the single dried specimen. The short blunt spur is downy inside; there is no callus at the base of the lip; the pollen and anther are those of V. Roxburghii, but the gland is much larger and rounder.

6. VANDA TRICOLOR Rchb. fil. in Otto Hamb. Gtz. 1860. p. 281.

a. suavis Rchb. fil. l. c. Huc: *Vanda suavis* L. F. sub 9:

V. foliis loratis flaccide recurvis apice oblique dentatis, racemis laxis elongatis, sepalis petalisque spathulatis retrorsis convexis valde undulatis sublobatis apice rotundatis, labello convexo trilobo lacinia media angusta alte bifida 3-costata lateralibus longis ovatis acutis patulis, auriculis erectis rotundatis.

(A). Flowers white, with blood-red scattered spots. Paxton's Flower Garden t. 42. fig. 3.

(B) *flava*. Flowers yellow, with broad oblong rich brown spots.

V. tricolor Hooker Bot. Mag. t. 4432.

Wild in Java.

This has the foliage of V. Roxburghii. Flowers large, deliciously fragrant, white or yellow, with rich marbling and spotting. Lip deep violet. The lobed sepals and petals are remarkable; they are both bent back at an angle of about 120°, and the petals are twisted round so as to present the principal part of their back to the eye. It is very rare in gardens, the plants thus called being almost always varieties of V. tricolor. The figure in the Botanical Magazine is characteristic, but I have never seen the flowers so yellow or the brown spots so large as they are there represented.

Pescat. 8. Rchb. fil. Xen. tab. 12. Rchb. fil. Bonpl. III. 219. Die äche Pflanze mit milchweissem Blüthengrunde blühte neulich sehr reich bei Herrn Consul Schiller, eine andere Form mit gelbweissen Grundtönen der Blühte steht jetzt bei Herrn Senator Jenisch in voller Entwicklung. Wir möchten nunmehr bald fragen, ob diese letztere nicht eine Mittelform zwischen Vanda tricolor und suavis sein könnte.

b. *tricolor* Rchb. fil. l. c. Huc: *Vanda tricolor* Lindl. B. Reg. 1847. sub t. 59. Paxt. Fl. G. t. 42 et l. c. sub 10:

V. foliis canaliculatis racemo paucifloro longioribus, sepalis petalisque aequalibus coriaceis unguiculatis obovatis obtusis, labello aequilongo trilobo per axin 3-lineato basi vix calloso, laciniis lateralibus rotundatis intermedio convexo cuneato emarginato latioribus, auriculis erectis rotundatis, calcare brevi obtuso.

V. suaveolens Blume Rumphia IV. p. 49. (1848).

(A) Sepals and petals cinnamon, blotched with brown; lip rose-colour.

(B) *flava*. Flowers wholly yellow, except a faint violet stain in the middle of the lip.

Wild in Java; on trees, especially Saguerus saccharifer, in woods on the mountains on the west side of the island—Blume.

This fine plant always has the sepals white at the back, whatever may be the colour of the inside. Some other varieties occur in collections, of which the three following are the most notable: — 1. *V. t. pallens*. Flowers cream-coloured, with scattered brown spots. 2. *V. t. cinnamomea*. Flowers yellower, with lines of close cinnamon-coloured spots. 3. *V. t. planilabris*. With a clear citron ground-colour, scattered broad brown spots, and a flat purple lip. This looks very distinct from the others.

Pescat. t. 44. Lem. Jard. Fl. II. t. 186. Blume in Ann. d'Hort. Fl. Jard. pays bas II. t.

7. VANDA BICOLOR Griffith notul. p. 354. ic. t. 336. L. F. sub 11:

V. foliis loratis coriaceis medio semitortis apice valde obliquis subtridentatis, racemis erectis rigidis paucifloris brevioribus, pedunculis angulatis, sepalis petalisque obovatis repandis falcatis tessellatis anticis duplo majoribus, labello linguaeformi emarginato basi minute bicalloso auriculis latioribus columnae margini connatis, calcare brevi conico obtuso.

Wild in Bootan, on trees on the banks of the Monass River, at the elevation of 2300 feet—Griffith.

Flowers less than two inch e sacross, whit eexternally, yellowish brown inside, with obscure livid tessellations. Ovary very long, white. Lip lilac, with large white auricles, giving the base a broad cordate appearance, dotted with lilac and tinged with yellow. Capsule very large, club-shaped, six-winged, almost a span long. The length of the anterior sepals brings the species into the neighbourhood of V. lamellata.

8. VANDA FUSCOVIRIDIS Lindl. in Gard. Chron. 1848. p. 351, with a cut repeated in Paxtons Fl. Gard. under tab· 42 p. 20. no. 4. L. F. sub 12:

V. . . . .; racemo paucifloro brevi, sepalis oblongis planis obtusis, petalis unguiculatis obtusis falcatis subundulatis latioribus, labello basi tomentoso ecalloso 5-sulcato bilobo medio utrinque exciso auriculis erectis obtusis nanis, calcare cylindraceo labelli dmidii longitudine.

Wild in (Java ?).

The flowers are about as large as V. furva, dull brown, with a little greenish yellow at the edge, and a pure greenish yellow lip; they have a slightly fishy smell. The species seems to be distinct from all the others; V. furva, to which it approaches nearest, has no undulation of the sepals, nor it would seem any tomentum on the lip, which bears, at its base, a great tooth which is missing, I believe, in this species.

9. VANDA LIMBATA Blume Rumphia IV. p. 49. L. F. sub 13:

V. „labelli lobo medio arrecto panduriformi margine inferne revoluto apice rotundato-spathulato integerrimo."

Wild in Java—Blume.

According to Blume the roots of this are very long. The leaves somewhat curved seven to eleven inches long, nearly an inch broad, obliquely retuse, channelled, and coriaceous. Racemes erect, lax. The flowers much spreading, about one and a half inch in diameter, ochre-yellow outside, clouded with brown inside; the two inner more narrowed at the base than the others. The lip much spreading, lilac, expanded at the base of the somewhat panduriform middle lobe, with five slightly elevated lines; spur compressed, obconical, with a flat transverse rounded callus.

10. VANDA HELVOLA Blume Rumphia IV. 49. L. F. sub 14:

V. „foliis rigidis subundulatis basi carinatis apice oblique retusis, racemis erectiusculis folio brevioribus laxe subtrifloris, phyllis perigonii oblongo-spathulatis lateralibus 2 exterioribus sub labello conniventibus, labelli saccati lobis lateralibus conniventibus obtusis intermedio patulo triangulari." — Blume.

Wild in mountain woods on the West of Java, flowering in March and April—Blume.

Blume states this to be a most magnificent species, forming a sort of transition between Vanda, Renanthera, and Cleisostema. Flowers the size of V. suaveolens (my tricolor), wine-red, shading into pale purple, with the lateral lobes of the lip short and a brighter purple. Column much dilatated at the base; the little sac of the lip has a pair of small callosities on the side opposite the column; the middle lobe is triangular-hastatè, tumid inside, and a little furrowed, concave beneath.

Gardeners Chronicle 1855, 316: sent by Pass, gardener at the Fence near Macclesfield. Shorter in leaves, dwarfer in habit than V. tricolor. We have not seem more

than a couple of flowers, which by no means justifie the reputation, which the species has hitherto enjoyed. Dr. Blume calls it a magnificent species with wine red flowers shading into pale purple and a brighter purple lip. What whe have seen were of a dirty straw colour, tinged with a brownish violet over the upper half of sepals and petals, while the triangular lip, although less yellow, was seen little brighter or deeper in colour, than the other parts.

11. VANDA STANGEANA Rchb. fil. in v. Schl. Bot. Ztg. 1858. p. 351.

Obs. Vanda Sulingi Bl. Lindl. Fol. Nr. 15. cf. Renantheram, p. 875.

12. VANDA TERES Lindl. in Wall. Cat., no. 7324. Bot. Reg. t. 1809. Bot. Mag. t. 4114. Griffith notul. 252. L. F. sub Nr. 16:

V. scandens, foliis teretibus, racemis ascendentibus subbifloris foliis aequalibus, sepalis oblongis obtusis; supremo erecto lateralibus semitortis labello suppositis, petalis majoribus suborbiculatis undulatis, labello maximo cucullato pubescente apice dilatato rotundato emarginato auriculis subrotundis maximis incurvis, calcare magno infundibulari.

Wild in hot damp jungles in Sylhet, Burmah, Martaban, scrambling up the bark of trees — Griffith.

Flowers very large; sepals white; petals sanguine, with a white border. Lip sanguine, strongly veined, yellow on the upper surface below the point, and speckled with crimson. A most beautiful species. Griffith says that the sepals and petals adhere at the base, and he questions its being a Vanda at all. No doubt in the triangular gland and cuneate caudicle it differs from other species. — Rev. Hort. Paris 1856. p. 421. t. 22.

13. VANDA HOOKERIANA Rchb. fil. in Bonpl. 1856. p. 324.

§. 3. Lamellaria.

14. VANDA HOERULEA Griffith Mss. Lindl. in Bot. Reg. 1847., sub t. 30. Nr. 1284. Griffith, itin. not. p. 88. Paxtons Fl. Gard. t. 36. L. F. sub 18:

V. foliis coriaceis apice aequalibus truncatis sinu concavo lobis lateralibus acutis, spicis densis erectis multifloris, bracteis oblongis concavis obtusissimis membranaceis, sepalis petalisque basi tortis azureis membranaceis oblongis obtusissimis planis subunguiculatis, labello coriaceo lineari-oblongo apice divergenti-bilobo obtuso per axin trilamellato auriculis triangularibus acuminatis, calcare curvo obtuso intus laevi.

Wild in Khasia, at the height of 3—4000 feet — J. D. Hooker and T. Thomson near the R. Borpanee at an elevation of 2500 feet, on trees of Gordonia, in Pine and Oak forests—Griffith.

Leaves five inches long by nearly one wide; equally two-lobed, and sharp-pointed, so that the end looks as if a piece had been struck off by a circular punch. The bright blue flowers grow in upright spikes. Each flower is nearly four inches in diameter. The lip is barely three quarters of an inch long, narrow with a short spur and a two-lobed point. Its surface is broken by three deep parallel perpendicular plates, and the auricles of the base are triangular and acuminated.

Rchb. Xen. I. tab. 5. — Lindl. Journal H. S. 1851. VII. VIII. Lem. Gard. Fl. I. 102. Pescat. 32.

15. VANDA COERULESCENS Griffith Notulae p. 352; Ic. t. 331. L. F. sub 19:

V. caule elongato, foliis angustis loratis bilobis, pedunculis nudis distanter vaginatis erectis multifloris foliis et caule multo longioribus,

pedunculis trigonis, sepalis petalisque basi tortis unguiculatis ovatis obtusis, labello ovato auriculato columnae adnato, calcare recto conico.

Wild in Burma, on trees at Tsenbo near Bamo—Griffith.

Only known from some notes of Griffith, and a rude figure. The species appears to be near V. spathulata. Sepals and petals pale blue; lip white at the base, blue at the point, with the auricles purplish lilac inside. Column blue, minutely dotted.

16. VANDA LAMELLATA Lindl. in Bot. Reg. Misc. 1838. Nr. 125. L. F. sub 20:

V. foliis coriaceis oblique et acute bidentatis, spica multiflora thyrsoidea, sepalis petalisque obovatis obtusis undulatis inferioribus subincurvis majoribus, labello lineis 2 divergentibus elevatis aculo obcuneato retuso pone apicem bituberculato, auriculis nanis rotundatis, calcare brevi cylindraceo conico intus hirsuto.

Wild in the Philippines—Cuming.

Flowers in long loose erect racemes, pale yellow, streaked with dull pale red.

17. VANDA SPATHULATA Spreng. Syst. 3. 719. L. O. 216. L. F. sub 21:

V. caule elongato, foliis ovato-oblongis obtusis oblique emarginatis, pedunculis nudis distanter vaginatis erectis multifloris foliis et caule multo longioribus, sepalis petalisque oblongis obtusis planis, labello rhomboideo apice incurvo medio cristato basi infra calcar acute conicum bicalloso auriculis retusis, ovario hexaptero.

Wild in Mysore and Malabar.

A species with long corymbose racemes of golden-yellow flowers standing high above the short distichous leaves. Both leaves and flower-stalks are marked with crimson spots; the former vary in breadth and length. Inside the spur of the lip is a pair of linear diverging calli free at the upper end. — Wight Ic. Ill. 915.

§. 4. Anota.

18. VANDA DENSIFLORA Lindl. in Paxt. Fl. Garden, under t. 42. L. F. sub 22:

V. foliis latis loratis coriaceis apice uncinato-bilobis obliquis, racemis strictis cylindraceis multifloris, sepalis oblongis obtusis, petalis angustioribus obovatis, labello edentulo inappendiculato lineis 2 elevatis juxta calcar pubescentibus oblongo carnoso infra apicem constricto exinde tripartito sub apice mucronato lobis rotundatis intermedio inflexo minore, calcare vacuo conico breviore.

Saccolabium giganteum L. O. 221.

Wild in jungles in Burma; near Prome—Wallich.

Although the pollen apparatus of this is not known to me, yet its habit, so much like that of V. gigantea, and its thick leathery lip, lead to the placing it in Vanda. The leaves in the specimen before me are nearly a foot long and one and three-quarters of an inch broad. The racemes are erect, very dense, with broad short membranous reflexed bracts when the flowers have fallen. The latter are much less fleshy than in V. gigantea etc. Two elevated hairy lines pass from within the spur diverging in the middle and reuniting at the contracted portion of the lip.

§. 5. Cristatae.

19. VANDA CRISTATA L. O. 216. Sertum Orchidaceum, fig. 3. in front. B. R. t. 48. 1842. L. F. sub 23:

V. foliis canaliculatis recurvis apice truncatis oblique excisis tridentatis, racemo erecto trifloro, foliis breviore, sepalis oblongis obtusis

fornicatis, petalis angustioribus incurvis, labello oblongo convexo sulcato apice saccato inaeqaliter tricorni, auriculis ovatis, calcare conico vacuo.

(B.) Flowers much paler. Lip without the apical horns.

Wild in Nepal—Wallich; Bootan—Griffith; B. Sikkim—Cathcart.

Flowers green; lip regularly striped with rich purple on a buff ground, and divided at the end into two or three narrow acute diverging unequal lobes. This is the plant mentioned in Griffith's Itinerary Notes p. 203. Nr. 1158, as an Aerides growing on trees at Chuka, remarkable for smelling of Cockroaches.

The var. B. is only known to me by one of Mr. Cathcart's drawings. It brings V. cristata still nearer to V. alpina.

20. VANDA GRIFFITHII Lindl. in Paxt. Flow. Gard. under t. 42. L. F. sub 24:

V. foliis canaliculatis recurvis acute inaequaliter tridentatis, racemis erectis 5-floris foliis brevioribus, sepalis lineari-oblongis recurvantibus, petalis acuminatis, labello ovato elongato sulcato mutico basi concavo vacuo.

Wild in Bootan—Griffith.

Very like cristata: but perfectly distinct in the termination of the leaves, which are sharply and unequally three-lobed, not truncate and praemorse; and in the form of the lip. The flowers are much smaller. A wrong reference in my herbarium led me to refer this to 546 of Griffith's Bootan plants, which the publication of his Icones shows to belong to V. bicolor.

21. VANDA ALPINA Lindl. Fol. sub 25:

V. foliis canaliculatis recurvis oblique (nunc acute) bilobis mucronulo saepius interjecto, racemis subsessilibus erectis 2—3-floris, sepalis oblongis sub apice incrassatis, petalis paulo minoribus, labello oblongo concavo nudo sub apice gibboso emarginato, auriculis cum lamina confluentibus.

Luisia alpina Lindl. in B. R. 1838, Misc. 101.

Wild in Khasia, at the height of 5—6000 feet—J. D. Hooker and T. Thomson; near Nungklow—Gibson.

The habit is that of V. cristata; the flowers approach so nearly to those of Luisia, that it is a question to which genus it belongs: the pollen apparatus is more that of Vanda. Flowers small, pale green. Lip yellowish, streaked with dull purple. Basal hollow deep purple.

1472. FIELDIA *Gaudich.*

Voy. 421. t. 36.

1. FIELDIA LISSOCHILOIDES Gaudich. l. c. Huc: *Vanda Batemanni* Lindl. Bot. Reg. 1846. t. 59. L. F.: Vanda 1:

V. foliis planis coriaceis oblique emarginatis obtusis racemo laterali multifloro brevioribus, bracteis coriaceis, alabastris globosis, sepalis petalisque falcatis obovato-cuneiformibus obtusis, labello triangulari basi saccato lobis ascendentibus acutis apice carnoso sulcato uncinato dente elevato in medio et crista brevi transversa juxta basin.

Angraecum quintum Rumph. Herb. Amb. VI. 102.
V. lissochiloides L. O. 216. Blume Rumphia IV. 49.
Fieldia lissochiloides Gaudich Voy. 421. t. 36.

A very large erect plant, with remarkably thick aerial roots, sword-shaped curved hard leaves averaging two feet in length, and a still longer spike of some score of flowers, each full two inches and a half across, flat, leathery, and long enduring; rich golden yellow, spotted all over with crimson in front; behind a vivid purple, fading away at the edges into violet. A rare species of extraordinary beauty, according to Blume the Angrec Kringsing Kitsjil of the Malays.

2. FIELDIA GIGANTEA Rchb. fil. Xen. II. p. 38. huc *Vanda gigantea* Lindl. in Wall. Cat., Nr. 7323. L. O. 215. L. F.: Vanda 2:

V. foliis late loratis apice obtusissimis emarginatis subaequalibus, racemis foliis duplo brevioribus, sepalis petalisque oblongo-obovatis obtusis aequalibus, labello incurvo canaliculato dolabriformi obtuse: callo conico in medio, auriculis nanis rotundatis.

V. Lindleyana Griff. notul. 353.

Wild in Moulmein, and other parts of Burma; on Lagerströmia Reginae, on the banks of Tenasserim river, near Barlavo — Griffith.

Leaves tough and fleshy, fifteen inches long by two and half broad. Flowers of the size of V. Roxburghii, resupinate, deep yellow with cinnamon brown blotches. Pollen-masses four, with a narrow caudicle and broad square membranous gland. Griffith says it is the only Orchid he had seen capable of rivalling American Vandeae: which is surely a great exaggeration.

1472/2. ESMERALDA *Rchb. fil.*

Xen. II.

1. ESMERALDA CATHCARTI Rchb. l. c. Huc: *Vanda Cathcarti* L. F.: Vanda p. 8. Nr. 17:

V. longe caulescens, foliis oblongis planis subundulatis apice rotundatis oblique bilobis, racemo laxo erecto paucifloro brevioribus, sepalis petalisque oblongis rotundatis sessilibus aequalibus, labello coriaceo basi mutico cuniculato auriculis nanis rotundatis lobo intermedio cordato obtuso margine elevato tomentoso rugoso, per axin bicostato ante cuniculum carnosissimo.

Wild in Sikkim Himalaya, at 3000 feet—J. D. Hooker; hot places 2—4000 feet—Cathcart.

This seems to be a very showy scrambling plant, with the habit of Renanthera coccinea. The leaves are six to seven inches long, by one band a half broad, or somewhat less. The flowers are fleshy and from three to four inches in diameter, in a two, to four-flowered straggling raceme; the sepals and petals are white outside, yellowish with horizontal narrow cinnamon-brown bands. The lip, which resembles a tray, is white, with a downy yellow turned-up edge; its auricles are speckled with red, as is the callus formed by the junction of two strong ribs that run along the middle dividing it into two halves; at the base, instead of a spur, there is a deep horizontal hole, worked in the thickness of the lip, and reaching to about one-third of its length. The column is green, tinged with red; the anther is bright yellow. The pollenmasses, which I have not seen, appear to be four.

No more remarkable Orchid has been found in Northern India, and therefore it is selected to bear the name of J. F. Cathcart, Esq., who caused a noble collection of drawings to be made in Sikkim, some account of which it is to be hoped that the public will have in time from Dr. Hooker.

Hook. fil. Himal. Pl. t. 23.

1472/$_2$. ACAMPE *Lindl.*

Fol. I. April 1853. Fasc. IV.

Sepala carnosa, fragilia, explanata, omnia basi aequalia, lateralibus calcari labelli leviter adnatis, dorsali paulo majore vel remotiore. Petala sepalis conformia, semper recta. Labellum carnosum, fragile, saccatum, vel calcaratum, columnae apodae adnatum, indivisum, auriculatum; saepius infra saccum linea elevata seu lamella pilisque auctum. Columna crassa, nana, apoda, angulis anticis saepius in mucronem productis; clinandrio verticali. Stigma transversum, subrotundum, rostello brevi obscuro, emarginato. Pollinia cereacea!, geminata; caudicula subulata polliniis longiore; glandula parva subrotunda. Anthera ovata, bilocularis, valvulis semiliberis. — Herbae epiphytae Asiae tropicae. Folia coriacea, disticha, apice obliqua. Flores dense racemosi carnosi, fragiles, lutei, maculati. Pedunculi breves, rigidi, laterales, bracteis latis brevibus diu persistentibus.

Although these plants have been hitherto placed in the genus Vanda, yet their small brittle flowers, in which there is no flexibility, their lip adnate to the edges of the colum, the slender caudicle, and very small gland afford convenient means of separating them from the true Vandas, to which they bear little resemblance. As now limited, Acampe forms a very natural groupe.

1. ACAMPE MULTIFLORA L. F. 1.:

A. foliis loratis apice obliquis emarginatis, pedunculis ramosis erectis subcorymbosis foliis brevioribus, labello ovato acutiusculo, calcare vacuo.

Vanda multiflora Lindl. Collect. Bot. t. 38.

Wild in China — Reeves; common in the ravines of Hong Kong, flowering in September, or earlier — Champion.

A species of no beauty, with coarse fleshy leaves and small yellow flowers dotted with sanguine. I seem to have formerly confounded with it specimens of A. longifolia, which differs among other things in having a hairy raised line inside the sac of the lip.

2. ACAMPE LONGIFOLIA L. F. 2:

A. foliis longis loratis apice obliquis obtusissimis, racemis horizontalibus foliis triplo brevioribus, labello carnoso plano subrotundo-ovato transverse rugoso basi concavo pubescente crista carnosa per axin.

Vanda longifolia L. O. 215. Journ. Hort. Soc. VII.

Wild in Tavoy—Wallich.

A fine-looking plant, with dark green distichous leathery wavy leaves as much as a foot and a half long two inches wide, obliquely rounded at the end. Flowers insignificant, sweet-scented, much like those of Acampe multiflora in form and colour, except that they are paler, in a corymb at the end of a short stiff ascending peduncle not one quarter the length of the leaves; very fleshy, and banded with red upon a dul yellow ground; the lip is white. Inside the pouch of the lip are numerous yellowish hairs, concealing an erect fleshy plate, which slightly divides the hollow of the lip into two halves.

3. ACAMPE WIGHTIANA L. F. Nr. 3.:

A. foliis oblique bilobis, racemis densis sessilibus nanis, sepalis petalisque obtusissimis, labello ovato obtuso fimbriato basi bicorni, calcare intus piloso.

Vanda Wightiana? Wight ic. t. 1670.
V. fasciata Gardner MSS.

Wild on trees in India; Iyamally Hills and Malabar—Wight; Ceylon—Gardner.

„Flowers yellowish, dashed with dark crimson or purplish spots; lip nearly white, with a red line at the base of the lamina." — Wight. Two subulate horns are represented in Wight's plate as springing from the base of the lip; they probably represent the tubercles found in A. congesta. My specimens are decayed and unexaminable as to this point.

Huc: *Vanda Wightiana* Lindl. Mss. Herb. Wight Ic. V. 1670.:

Leaves strapshaped unequally twolobed at the apex; peduncles much shorter than the leaves, divaricate, sep. pet. subspathulate, sep. all equal, larger than the petals, lip threelobed, lat. lob. short obtuse; middle one suborbicular, saccate at the base, fruit oblong, conical. Flowers yellowish, dashed with dark crimson or purplish spots, lip nearly white with a red line at the base of the lamina. Jyamally Hills.

My spec. seen by Lindl. is in fruit. Had he seen flowers, he would have referred it to a diff. genus. Aff. Saccolab. papilloso?

4. ACAMPE CONGESTA L. F. sub Nr. 4:

A. foliis elongatis canaliculatis oblique bilobis mucrone interjecto, racemis subsessilibus nanis, labello rhombeo acutangulo papilloso linea media elevata, calcare intus piloso, linea elevata sursum mucronata.

Vanda congesta Lindl. in Bot. Reg. 1839, Misc. 94.

Wild in Madras Presidency—Wight $\frac{1836}{1019}$; Ceylon—Loddiges.

Flowers small, yellow and brown. From A. papillosa, to which I have formerly referred it, owing to some mixture of specimens, it differs in having very long leaves, and an acute-angled lip, with a distinctly elevated middle line. At the junction of the spur and lamina there is a stout tubercle on each side.

5. ACAMPE PAPILLOSA Lindl. Fol. Nr. 5:

A. caule elongato ramoso, foliis obtusis oblique emarginatis mucrone interjecto, racemis sessilibus nanis, labello ovato oblongo papilloso medio elevato calcare intus piloso auriculis antice confluentibus.

Saccolabium papillosum L. O. 222. Bot. Reg. t. 1552, with its synonyms.

Wild on the continent of India; Prome—Wallich; Malabar; East Bengal and Chittagong—J. D. Hooker and T. Thomson; hot valleys of Sikkim—J. D. Hooker.

Flowers small. Petals and sepals yellow banded with red. Lip white. It differs from A congesta in the form of the lip, and the nature of the papillosity, which is always crowded into an elevated line in the middle. The Sikkim plant collected by Dr. Hooker, and referred here, is not in flower. The lip varies in its length and in the degree of crispness; but is very badly represented in the Botanical Register.

6. ACAMPE CEPHALOTES Lindl. Fol. Nr. 6:

A racemis capitatis pedunculo rigido squamato brevioribus, labello ovato subcordato papilloso crispato calcare brevi conico intus villoso, auriculis carnosis confluentibus.

Wild in Sylhet; on the plains — J. D. Hooker and T. Thomson.

„Flowers yellowish green with transverse bars of brown purple. Lip posterior, very pale rose, with deeper spots, much fimbriated on the disk." — J. D. H. and T.

T. This exists in Hooker and Thomson's Indian collection numbered 197; but the leaves associated with it appear to belong to Vanda alpina. The short conical blunt spur, very dense flowers, and fleshy shallow auricles distinguish it sufficiently from A. papillosa.

7. ACAMPE EXCAVATA Lindl. Fol. Nr. 7:

A. foliis rectis planis lobo altero truncato dentato altero longiore rotundato, racemis sessilibus nanis, sepalis petalisque angustis dorsali majore, labello ovato acuto excavato basi unidentato, calcare intus piloso.

Wild in Western India; the Concan—Law.

Habit, that of A. papillosa. Colour of flowers unknown.

8. ACAMPE DENTATA Lindl. Fol. Nr. 8:

A. caule flexuoso, foliis latis planis oblique rotundatis paniculae gracili angustae aequalibus, sepalis petalisque distantibus falcatis, labello brevi ovato in centro papilloso basi utrinque dentibus 2 carnosis aucto, auriculis obsoletis, calcare recto cylindraceo elongato pendulo intus villoso.

Wild in Sikkim Himalaya, on the lower ranges—J. D. Hooker.

The long slender panicle, and the four great fleshy teeth at the base of the lip are features peculiar to this species, whose flowers are about the size of A. papillosa; their colour is unknown to me.

1473. RENANTHERA *Lour.*

Fl. Coch. 521. — Rchb. fil. Xen. I. p. 86:

Genus affine Vandae R. Br. labelli articulati calcari medium versus extruso. — Perigonium carnoso membranaceum, vulgo discolor Vandarum more. Sepala ac tepala liberrima. Labellum trilobum: lobi laterales erecti; lobus medius vulgo productus, planus seu compresso anceps; calcar vulgo anticum inter lobos laterales; insertio vulgo libere articulata, raro (in R. micrantha Bl.) sublibera ungue basi gynostemii adnato. Gynostemium semiteres breve: androclinium horizontale; rostellum seu muticum retusum emarginatum, seu bimucronatum; fovea (uti in Vandis) diversissima. Anthera depressa vulgo ligula media retusa antice producta. Pollinia oblonga, extrorsum fissa nunc bipartita. Caudicula linearis, seu triangulo ligulata apice nunc subulata; peltata supra glandulam rotundam transversamve.

Vandeae ramosae, pulchre distichifoliae, foliis loratis oblique bilobis. Racemi paniculaeve laterales, nunc flaccidi. Labellum vulgo pro perigonio minutum. Bracteae ubi non commemoratae triangulae minutae.

Clavis generis e Xen.:

A. Labelli lobus medius carnosomembranaceus planus; calcar liberum subconicum . . . . *A. Eurenanthera.*
 a. Sepala lateralia libera.
  aa. Rostellum muticum.
   1. Sepala inaequalia; lateralia oblongospatulata, sepalum dorsale lineari-ligulatum . . . . . . *R. coccinea* Lour.
   2. Sepala aequalia omnia ligulata . . . . . . *R. Sulingi* Lindl.
  bb. Rostellum bimucronatum.

1. Sepala inaequalia: lateralia cuneato semiovata dimidiata, sepalum dorsale ligulatum, labelli lamina triangula brevis . . . . *R. micrantha* Bl.
2. Sepala aequalia leneariligulata, labelli lamina linearilligulata longiuscula . . . . *R. moluccana* Bl.
b. Sepala lateralia (lanceolata acuta) excepta basi valvato conglutinata . . . . *R. matutina* Lindl. O.
B. Labelli lobus medius carnosus planus quasi horizontaliter bilamellatus. Calcar oblique adnatum ostio semiclauso *B. Arrhynchium?*
1. Labellum curvum ovatum basi minutissime auriculatum *R. labrosa* Rchb. fil.
2. Labellum rectum ligulatum auriculis baseos magnis angulatis intus gibberosis . . . . *R. bilinguis* Rchb. fil.
C. Labelli lobus medius carnosus anceps bifidus. Calcar angulatum parvum subnullumve . . . . *C. Arachnanthe.*
a. Ovarium et sepala extus glabra; calcar conicum; labellum sacipiti superpositoque bidentatum . . . . *R. flos aëris* Rchb. fil.
b. Ovarium et sepala extus hispida; calcar evanidum:
1. Epichilii aristula recta; carinula inflexa duplex . . . *R. Lowei* Rchb. fil.
2. Epichilii aristula retrorsa; carinula inflexa simplex . *R. Rohaniana* Rchb. fil.

A. Eurenanthera: labelli trilobi lobus medius carnoso membranaceus planus simplex Rchb. fil. l. c. p. 87:

A. Sepala lateralia libera.

aa. Rostellum muticum.

1. RENANTHERA COCCINEA Lour. Coch. II. 637. Rchb. fil. l. c.:

Sepalis lateralibus oblongospatulatis obtusis, sepalo dorsali cum tepalis lineari ligulato, labelli lobis lateralibus quadratis, lobo medio ligulato basi bigibboso, calcari acuto conico recto. Bot. Reg. 1131. Bot. Mag. 2997, Paxt. Mag. 49.

Planta bene ramosa. Radices aëreae longissimae. Folia ligulata apice oblique emarginata bene aequalia. Paniculae amplissimae. Flores intus pulchre sanguinei, tepala et sepalum dorsale pallida basi atrosanguineo fasciata.

In Cochinchina ex Loureiro. Apud Chinenses et Javanenses culta e. g. Hort. Bat. Meyen!

2. RENANTHERA SULINGI Lindl. O. 217. Rchb. fil. l. c.:

Sepalis tepalisque ligulatis obtuse acutis, labelli lobis lateralibus triangulo falcatis, lobo medio ovali bicalloso, calcari acute conico antrorsum flexo.

Aërides Sulingi Blume Bjdrg. 367. Armodorum distichum Kuhl et Van Hasselt Orch. et Ascl. VI. (Icon. optima et picta a G. Van Raalten et F. O. Keghel.) Vanda Sulingi Bl. Hort. Lugd. Bat. 62. Caulis foliis anguste ligulatis, nunc ultrapedalibus apice obtuse et oblique bilobis insignis. Pedunculus folio brevior seu aequalis, simplex racemosus 4—5florus. Bracteae pro genere magnae semiovatae cucullatae ovario pedicellato tamen multo breviores. Sepala ac tepala spatulata obtusiuscula. Labellum breviter unguiculatum, articulatum (si lateribus gynostemii adnatum esset, potius Cleisostoma esset planta!) trifidum; laciniae laterales triangulo falcatae antrorsae linea superiori antrorsa erosulae; fundo basilari sub gynostemio callo semiovato tumido; lacinia media oblonga lineis elevatis transverse striatulis sulcatisque notata; calcar saccatum antrorsum, antice linea transversa crassa crenulata ostium more Arrhynchii claudente. Gynostemium semiteres, androclinium planum per longitudinem unicarinatum; antice emarginatum; fovea rotundula dente in margine inferiori insiliente; fascia infrastigmatica minute verruculosa. In rupibus ad montem Suling Provinciae

Buitenzorg" Bl. Hort. Lugd. l. c. In rupibus et arboribus Javae occidentalis Bl. Hort Lugd. l. c. Ad arbores pendula in sylvis prope Litjin 3. Majo 1845. Zollinger 6821

Huc: *Vanda Sulingi* Lindl. Fol. sub 7:

V. foliis rigidis canaliculatis rectiusculis apice oblique retusis, racemis erectiusculis folium aequantibus laxis 3—5-floris, sepalis petalisque lineari-spathulatis, labelli lobo intermedio ovato patulo incrassato tuberculis lineato, auriculis ascendentibus truncatis erosulis, calcare brevi incurvo.

Aërides Sulingi Blume, Bijdr. 367.

„*Armodorum distichum* Kuhl and v. Hasselt Orchid. t. 6." — (Bl.)

Renanthera Sulingi L. O. 217.

Wild in Java; on rocks and trees on Mount Suling, in the province of Buitenzorg — Blume.

Flowers dull purple. — Blume. I am uncertain whether a plant, very rare in gardens, bearing this name, and much resembling a Renanthera, is what Blume intends; but I presume not.

bb. Rostellum bimucronatum.

3. RENANTHERA ELONGATA Lindl. Orch. 218. Huc: *Renanthera micrantha* Bl. Mus. Lugd. Bat. 60. Rchb. fil. Xen. p. 87:

Sepalis lateralibus unguiculatis dimidiato semiovatis, labelli lobis lateralibus rectilineis humillimis nunc sinuatis, lobo medio triangulo brevissimo basi bicalloso, calcari obtuse conico.

R. matutina Lindl. Bot. Reg. XXIX. 1843. 41. nec Lindl. O. 218.

Huc: *Renanthera elongata* Lindl. Orch. 218. Rchb. Xen. p. 88:

„Caule ramoso, foliis lato linearibus oblique emarginatis, paniculis elongatis nutantibus, sepalis exterioribus lateralibus latioribus spatulatis labelli limbo ovato basi bicalloso. (Flores punicei.)

Crescit in rupibus calcareis prope Kuripan. Floret Aprili—Augusto. Bl. Bjdr. 367.

Prope Kuripan cl. Zollinger R. matutinam invenit, sed monet locum cultura immutatum. Omnis diagnosis eo recedit a R. matutina, quod in hac cl. Bl. monet sepala lateralia connexa, quod in illa non affert.

4. RENANTHERA MOLUCCANA Bl. Rumphia IV. p. 54, Tab. 193. fig. 2. et Tab. 197. E:

Sepalis omnibus lineariligulatis, labelli lobis lateralibus semiovatis bilobulatis; lobulo postico rotundato, antico triangulo, lobo medio lineariligulato basi ecalloso.

Angraecum rubrum Rumph. Herb. Amb. VI. 101. Tab. 44. fig. 2.

Folia abbreviata oblonga apice obtuse biloba. Pedunculus longe exsertus apice paniculatus, flores quam in praecedente ter quaterve majores, punctati. In Amboina.

B. Sepala lateralia excepta basi valvato conglutinata.

5. RENANTHERA MATUTINA Lindl. Orch. 217. Rchb. fil. l. c. 88. et p. 90:

Eurenanthera sepalis lateralibus excepta basi valvato conglutinatis.

„*Aërides matutina?*" Bl. Bjdr. 366. Tab. XXIV.

Renanthera matutina Lindl. Orch. 218. Pescatorea fascic. 3. (Ic. haud ita bona.)

Nephranthera matutina Hassk.

Planta valida. Folia ligulata apice obtusato inaequaliter biloba more tribus distichа. Vaginarum nunc violacearum bases inferiores a radicibus adventitiis crassis cylindraceis brevibus perforatae. Panicula bene ramosa effusa, bi—tripedalis. Pedunculi intense purpurei pars inferior nuda, paucivaginata. Rami flexuosi. Bracteae

triangulae minutissimae. Ovaria pedicellata filiformia uncialia. Perigonium coriaceo carnosum. Sepalum summum lineariligulatum acutum. Sepala lateralia a basi angusta magis dilatata, basibus inter se remotis fissuram pro labello permittentia, dein dilatata, omnino contigua, commissurae parte suprema extrorsum angulata, dein antrorsum gibberoso prominula, marginibus externis revolutis. Tepala angustiora, basi melius attenuata. Labellum minutissimum cum gynostemio bene articulatum; lobi laterales erecti semiovati antice falculati, nunc margine superiori bidentato bilobuli in calcar saccato cylindraceum descendentes; lobus medius ligulatus parvus nunc acutiusculus, margine undulatus seu planus. Gynostemium semiteres, retusum, antrorsum utrinque superne rhombeo angulatum, toto margine antico velutinum; fovea elliptica transversa; androclinium velutino marginatum, bicameratum; rostellum retusum medio emarginatum; anthera depressa antrorsum ligulata retusa. Pollinia oblonga, extrorsum more generis fissa insidentia in apice lineari caudiculae ceterum triangulo ligulatae glandulae oblongae peltatim affixae. — Flores primum pulcherrime sanguinei, extus pallidiores, disco sepalorum lateralium aureo, uti tepalorum bases atropurpureo guttato. Labellum intus atropurpureum. Gynostemii dorsum atropurpureum; facies antica straminea lineis duabus longitudinalibus violaceis sub fovea. Sensim flores mutantur in colorem luteo cinnabarinum.

Salak. Blume.

B. Arrhynchium: labelli lobi laterales prope obliterati; lamina media calloso carnosa supra ostium calcaris oblique adnati protensa. (Pollinia bina bipartita seu quaterna caudicula triangula seu lineari subulata; glandula quadrata seu triangularis.)

6. RENANTHERA LABROSA Rchb. fil. l. c. p. 88:

Labelli ascendentis lamina ovali medio gibberosa, auriculis minutis triangulis, glandula triangulari.

Arrhynchium labrosum Lindl. Fl. Garden I. 142.

Habitu Sarcochili Vandaeve parvulae. Folia disticha coriacea. Racemus. Flores aequidistantes, diametro unciae, coriacei, purpureobrunnei, flavo maculati. Sepala et tepala subaequalia, obtusa, tepala subbreviora, omnia basi aequalia. Labellum ungue cuneato ascendens, carnosum ante basin utrinque minute triangulo auriculatum; lamina lutea carnosa crassissima rugosa ovalis, horizontaliter fissa, calcaris obtusi convexitati adnata, ore calcaris incrassato fere clauso. Columna nana, teres basi producta, stigmate circulari. Anthera subrotunda, bilocularis, membranacea, depressa. Pollinia quaterna, geminata aequalia, caudicula subulata, glandula triangulari membranacea semilibera. Rostellum truncatum. — „The lip is a hollow curved blunt horn, rising from the base of the column with its convexity upwards; on the convexity lies a flat yellow wrinkled fleshy tongue, which seems as if it consisted of two layers; at the base the lip is concave and has on either side a short truncate ear, with which it clibs the column. Column is taper, short, straight, with a nearly circular slope. No known genus can receive this singular plant, unless it is thrown into the crowd of Saccolabs, among which however it would scarcely be sought; for its thick fleshy lip is very different from the thin membrane found in that genus. Moreover it is essentially distinguished by its rostel, not being extended into a long beak as is the case in all genuine Saccolabs and Sarcanths. As for Sarcochilus, which it is said to resemble, that genus is quite different in the long narrow foot on which the lip is placed, as well as in the nature of the lip itself. — Tropical Asia."

Huc: *R. bilinguis* Rchb. fil. Xenia 4:

Labelli patuli lamina ligulata medio plana, auriculis magnis rectangulis, intus gibberosis, glandula quadrata. An haec planta eadem: „I am uncertain, whether a plant,

very rare in Gardens, bearing this name. („Vanda Sulingi") and much resembling a Renanthera, is what Blume intends; but I presume not" Lindl. Fol. IV. Vanda p. 7. sub V. Sulingi Bl.

C. Arachnanthe: labellum minute angulato calcaratum seu angulatum; lobus medius ancipiti carinatus. (Basis labelli lineis gyrosis percursa.)

A. Ovaria et sepala extus glabra; calcar manifestum.

6. RENANTHERA FLOS AERIS Rchb. fil. l. c. p. 88:

Sepalo dorsali lineari ligulato obtuse acuto recto, tepalis sepalisque lateralibus descendenti arcuatis subaequalibus nunc apice oblique retusis, labelli lobis lateralibus oblongo quadratis erectis lineis gyrosis inter utrumque lobum supra fundum calcaris retrorso conici minutis, lobo medio carnoso ancipiti superpositeque bidentato.

Angurek Katonging Kaempf Amoen 868. c. ic.
Epidendrum flos aëris L. Sp. 1348.
Limodorum flos aëris Sw. Schrad. Journ. 1799. 233.
Arachnis moschifera Bl. Bijdr. 365. Tabellen 26.
Arachnanthe moschifera Bl. Rumphia IV. 196. 199
Renanthera Arachnites Lindl. Orch. 217.

„Caulis radicans, ramosus altissime scandens." Bl. Folia oblonga angustata apice minute biloba. „Panicula" Bl. Racemosam habemus. „Flores sordide flavi brunneo fasciati ac guttati." Zollinger. Flores omnium maximi. Crescit in Java, unde in Japoniae hortos allata. Locis cultis circa Bataviam, Buitenzorg etc. Blume! Kalkfelsen am Kuripan 18. Dec. 1842. Zollinger 945.

B. Ovaria ac sepala extus hispida; calcar evanidum.

8. RENANTHERA LOWEI Rchb. fil. l. c. 89:

Sepalis tepalisque oblongo lanceolatis margine undulatis, labelli lobis lateralibus triangulis, lineis gyrosis interjectis inter utrumque supra angulum obtusum (calcar evanidum) in basi lobi medii, lobi medii carina inflexa ancipiti duplici, superiori ligulata retusa, ancipiti, inferiori acutangula minuta, ipso lobo bipartito, partitione superiori erecta triangula in aristam rectam exeunte, inferiori acuta triangula antrorsa.

Vanda Lowei Lindl. Gard. Chron. 1847. 239.

„Folia coriacea rigida disticha." Lindl. Pedunculus flaccidus, pendulus „usque duodecim pedes longus" papillis muriculatis scaber distanti racemosus. Bracteae semiovatae acutae ovaria hispida aequantes, extus minute scabrae, margine dense scabro velutinae. Perigonium illi Renantherae coccineae amplius et sepala ac tepala subaequalia latiora. Tepala et sepala intus punctulato velutina. „Flores citrini, cinnamomeo guttati et fasciati." — Gynostemii dorsum bene velutinum. — Crescit in arboribus exaltatis locis humidis insulae Borneo. Low!

Huc: *Vanda Lowei* Lindl. in Gard. Chron. 1847. p. 239. Fol. Vanda Nr. 3.:

V. (foliis coriaceis rigidis distichis), racemo longissimo pendulo flexuose scabro-piloso, floribus maximis distantibus coriaceis, sepalis petalisque lanceolatis acuminatis valde undulatis extus scabris, labello parvo unguiculato triangulari glabro sub apice saccato acutissimo supra medium cornu refracto setaque sub apice aucto.

Wild in the forests of Borneo on high trees in very damp places—Low.

Flowers lemon-yellow, barred and blotched with bands and spots of the richest cinnamon, three inches in diameter, disposed in pendulous racemes ten to twelve

feet long. In some respects, especially in the minute simple unguiculate lip saçcate near the point, and two-horned there, this resembles the genus Arachnanthe. The column is tomentose; the sepals and petals downy. All the plants which where imported are supposed to have perished: so that this noble species has still to be obtained for cultivators.

9. RENANTHERA ROHANIANA Rchb. fil. l. c.:

Sepalis tepalisque lanceolatis margine undulatis, labelli lobis lateralibus semiquadratis humillimis, lineis gyrosis interjectis inter utrumque supra angulum (calcar evanidum) in basi lobi medii carina inflexa simplici ligulata retusa ancipiti, ipso lobo bipartito, partitione superiori triangula aristata retrorsa, inferiori acuta triangula ascendente.

Pedunculus elongatus nigro hispidus (in praecedenti cinnamomeo hispidus): flexuosus, gracilis. Bracteae ovatae acuminatae nigro velutinae limbosae, extus hispidae, ovaria atrobrunneo hispida paulo superantes. Sepala ochracea purpureo guttata fuisse visa, quam in praecedente bene minora. Anthera transversa vertice minute cristata, vertice medio acuto triangula, prope eadem, quae in R. bilingui. Caudicula apice latior, quam basi, obcuneata. Pollinia sphaerica extus fissa. Glandula peltata. Borneo Hupe.

En perpulchra species, quam nobilissimo principi Camillo Rohan, Botanices ac Horticulturae fautori egregio et expertissimo grati animi signo annuente ipso obedienter dicavimus.

1474. DIPLOCENTRUM *Lindl.*

Bot. Reg. 1522.

1. DIPLOCENTRUM RECURVUM Lindl. Orchid. p. 218: Wight Ic. VI. (1851.) 1680:

Leaves folded, fleshy, recurved: racemes panicled, recurved, flowers small: spurs obconical, incurved, upper sepal and petals nearly equal, anterior sepals larger, unequal sided: lip ovate, entire, acute, much larger than the sepals; flowers deep pink, fining of on the margins to white, lip crimson.

Jyamally Hills. May—Sept.

2. DIPLOCENTRUM LONGIFOLIUM R. Wight Ic. V. I. (1851.) 1681:

Leaves linear, strapshaped, chanelled, obtuse, oblique, the apex emarginate, racemes axillary, erect, sparingly branched, longer than the leaves: sepals and petals ovate, nearly all equal, obtuse; lip entire, undulated, obtuse or emarginate, capsules obovate, pendulous, connectivum prolonged into a flat very obtuse appendage with the cells at the base. Sepals and petals dull brownish, tinged with pink, lip dull pinkish-lilac.

On trees: Orange Valley, Neilgherries, also Jyamally Hills. fl. June. July.

3. DIPLOCENTRUM CONGESTUM R. Wight Ic. V.I. (1851.) 1682:

Leaves short, sub-elliptic, oblong, deeply emarginate or 2 lobed at the apex, racemes longer than leaves, axillary, sparingly branched, erect, manyflowered: flowers congested, small, sepals and petals ovate: lateral sepals oblique, larger than petals; lip ovate, tapering, truncated at the point; connectivum of anther prolonged, truncated at the apex: caudicula long subulate; gland very large, somewhat twolobed. Colour not preserved, but like preceding.

Jyamally, trees, rainy monthes. Rare.

1474 b/. COTTONIA Wight.

Wight Ic. V. (I.) 1851. 1755.

Perianth spreading. Sepals broad obovate, minute. Petals smaller, sublanceolate-cuneate at the base. Lip ecalcarate constricted in the middle, subpanduriform, upper half larger suborbicular, emarginate, cuspidate in the sinus; lower half orbicular bituberculate at the base. Column erect, clavate, margins dilated, membranous in front. Anther 2celled, with a long blunt rostellum. Pollinia 2, unequally twolobed, posterior lobes smaller; caudicle filiform; gland orbicular. Capsule long, clavate drooping.

Caulescent epiphyte: leaves linear distichous obliquely emarginate, racemes short few-flowered, compact on the apex of very long branched peduncles: flowers pedicelled, flower buds globose. — I dedicate this genus to Major Frederic Cotton of the Madras Engineers, a most indefatigable collector and successful cultivator of Orchideous plants, and who has now a large and for India unique collection in his conservatory in Ootacamund. This genus seems to me to approach Saccolabium by habit, but different from all the genera of that tribe in the total absence of even an approach to a spur, by the form of the column, and still more by the unusual form of the lip.

1. COTTONIA PEDUNCULARIS Rchb. fil. in Catalog der Orchideensammlung von G. W. Schiller 1857. p. 22. *Vanda peduncularis* L. O. 216. *Cottonia macrostachya* Wight l. c. 1755. Malabar, near Tellicherry, Jerdon, to whom I am indebted for a coloured sketch of the plant and the specimens from which the dissections were made.

Paxt. Fl. G. III. 43. c. xyl.: Ceylon Read. Flowers pale green or yellowish, sweetscented, with a deep purple fleshy lip bordered with green and hairy at the edges so as to resemble some Ophrys. Growing in racemes, from 6—12 together from the thickened ends of peduncles, sometimes as much as three feet long and even furnished with side branches. In some respects this is not a true Vanda. The pollenmasses are absolutely double and not hollowed out on one side, the caudicula is unusually long and slender, and the lip is not saccate; flat, firm, fleshy. We do not however at present think it expedient to separate it, whatever may happen whenever the distichous leaved Orchids shall be sorrowfully reinvestigated. Labellum carnosum, margine tenerius, pallescens, utrinque leviter emarginatum, disco atropurpureo, sessile, immobile, linea mediana exarata pallida, in trianguli carnosi apicem desinente, basi auriculatum, etiam carnosius, tuberculo parvo barbato inter pubem ad basin trianguli inter auriculas, aestivatione ab apice involutum. Columna nana, erecta, tomentosa, antice utrinque unidentata; stigmate alte excavato, circulari. Anthera bilocularis antice membranacea, apiculo recurvo. Pollinaria 4 geminata, aurantiaca, deltoidea, in apice caudiculae longae, gracilis; glandula olivacea carnosa subrotunda.

2. COTTONIA ? CHAMPIONI Lindl. in Benth. fl. Hongk. Hook. Lond. J. VII. 35:

Foliis distichis apice bidentatis mucrone interjecto brevioribus, labello ovato apice setaceo bipartito.

Herba epiphyta, basi radicans. Folia alterna, disticha, coriacea, lineari oblonga, basi inaequali lobata, apice denticulata, bifida, apiculata. Racemi pauciflori, folio oppositi. Flores dilute lutei, columna pallide violacea. Perigonii ringentis foliola aequalia, oblonga, dorso carinata, interiora angustiora. Labellum semi—cymbiforme, breve, processu apiculatum apice furcato, brachiis setaeformibus terminante, ecalcaratum. Columna brevis, dilatata, fornicata. Anthera bilocularis, erecta, bidentata: pollinia 4, caudicula lineari subulata. Mountains of Hongkong. On Victoria Peak, in April. (Champ.) The labellum of this Orchidaceous plant (otherwise inconspi-

cuous) is very remarkable, being semi—cymbiform, with a process at the extremity like a browsprit, ending in two setiform forks. In the midst of the confusion reigning among the Sarcanthoid Vandeae, it seems probable that Dr. Wights' Cottonia (his C. macrostachya is Vanda peduncularis Lindl.) is a good genus; and in that case the present plant appears to be included in the definition. Major Champion believes that he saw a larger-flowered species of the same genus in Mr. Braine's garden, supposed to come from Canton.

1476. CAMAROTIS *Lindl.*

L. O. p. 219.

1. **CAMAROTIS OBTUSA** Lindl. Bot. Reg. XXX. (1844) Misc. 71:

Labello calceiformi lobulo terminali truncato obsolete tridentato inflexo intus appendice biloba canaliculata aucto, columna torta, rostello ungue labelli vix longiore.

India. Dull dirty rose-coloured flowers with a yellow lip. Much larger flowers, than in C. purpurea, but by no means so handsome. The little lobe at the end of the lip is fleshy, slightly 3lobed and furnished with a singular 2-lobed, channelled appendage. The column is twisted half round, as in Mormodes.

2. **CAMAROTIS ROSTRATA** Rchb. fil. *Aërides rostratum* Roxb. Fl. Ind. III. 474. *Camarotis purpurea* L. O. l. c. Lindl. Sert. t9. (1838):

Leaves linear, 3'' long, 4—5''' broad, coriaceous, slightly curved, 2—3—4 denticulate. Stem 2edged. Racemes opposite the leaves, straggling, longer, or shorter than the leaves. Flowers purple, spread open. Pedicels ½''. Sepals and petals purple, petals same shape as the dorsal sepal, darker. Lip is narrow, channelled at its base, united at its back for more than half the length to the lateral sepals; furnished at the apex with a hollow conical chamber having a narrow oval aperture, from the anterior edge of which a short subulate process proceeds and lies down over the orifice; in all respects of a deeper purple than the other segments of the perianth; otherwise the lip may be described as threelobed with the lateral lobes united by their faces except near the point, which is inflated and extended into a hollow obconical chamber, over the aperture into which the intermediate subulate lobe is inflected. The column is very short, round, with the rostell prolonged into a conical subulated back, emarginate at the apex, many times longer than the column. Anther placed upon the back of this beek, in such a way, that while it terminates the column, it is almost inverted in position by the ascending direction of the beek, prolonged at the point into a thin, narrow, sharp appendage, not quite 2-celled. Pollenmasses 2, globose, attached to the end of a long subulate caudicule, which adheres to a dilated peltate gland. Lip is distinctly chambered at the point! Dr. Rbgh. says, that before expansion the beak of the column in lodged in this cavity of the lip.

Obs. Mixtura ex Camarotidis floribus ac foliis cauleque Dendrobii, crumenati? (vidi typum!):

Saccolabium fasciculatum Lindl. Hook. Bot. Journ. II. 238:

Caule erecto distiche folioso, foliis ovatis amplexicaulibus, obtusis oblique emarginatis, panicula nuda ramis simplicibus virgata, ad nodos apicem versus gemmas paleaceas floridas gerentibus, floribus e gemmis erumpentibus (parvis) ringentibus, sepalis lateralibus obovatis apiculatis, supremo lineari oblongo concavo, petalis linearibus obtusis apice subdenticulatis, labello porrecto conico leviter arcuato lobis lateralibus obtusis erectis, intermedio triangulari carnoso, rostello elongato sigmoideo.

In foliage this species has the habit of Epidendr. elongatum, but its inflorescence is quite peculiar. The stem, which is a foot and a half long, at its end becomes leafless, and divides into several rod-like branches, each a foot or so in length.

Their branches are too leafless, clusters of membranaceous bracts such as we find in certain species of Pleurothallis and Dendrobium. From amongst these bracts emerge the flowers, which are small and rather fleshy. New Guinea Mr. Hinds.

1476/1. STAUROPSIS *Rchb. fil.*

in Otto Hamb. Gartenztg. 1860. p. 117. e. p.

1. STAUROPSIS PHILIPPINENSIS Rchb. fil. Huc: *Trichoglottis philippinensis* Lindl. Ann. N. H. XV. 1845. p. 386:

Foliis subrotundo ovatis emarginatis mucrone interjecto, sepalis oblongo-lanceolatis patulis, petalis reflexis linearibus brevioribus, labello esaccato pubescente secus axin villoso oblongo convexo apice hastato trilobo dentibus baseos brevibus rotundatis.

Philippinen. (Cuming).

A plant with the habit of a Vanda, buth with very short, roundish, leathery, somewhat imbricated leaves. The flowers are solitary in the axils, an inch and a half from the point of the dorsal sepals to that of the labellum. The species differs from Blume's fig. and descript. in not having a very short spur or sac at the base of the lip, but in nothing else that seems essential.

1479. MICROPERA *Dalzell.*

Hook. Journ. III. 282.

(nec Lindl. O. 219. — quae Camarotis.)

1. MICROPERA MACULATA Dalzell l. c.:

Subacaulis foliis planis lineari oblongis basin versus angustatis apice obliquis emarginatis, cum mucronulo; racemis basilaribus vel axillaribus simplicibus solitariis elongatis erectis multifloris a basi floriferis, foliis duplo longioribus, sepalis petalisque subaequalibus obovatis basi liberis, labelli albo et roseo picti utroque margine cornuto, cornubus reclinatis columnam aequantibus, calcare perianthio breviore saccato obtuso, porrecto, intus piloso, laminae 3-lobatae brevius cucullatae supposito. Capsula oblonga 1½ pedes, diam. 4—5 l., cernua, 6-sulcata, angulis obtusis. Flores 4—5 l. diam. Sepala et petala lutea, medio macula purpurea notata. Sepala lateralia patentia, petala cum sepalo supremo erecta, conniventia. Pollinia inaequalia bipartibilia. Folia 4—5 pollices longa, 1 lata. Crescit in arboribus prope Tulkut, in montis Syhadrensis lat. 16°. Fl. Majo — meo judicio forma aberrans, dubia.

1479.b/ BROMHEADIA *Lindl.*

Bot. Reg. XXVII. 1841. Misc. 184.

Perianthium (candid.) sesquipollicare, cylindraceo connivens, laciniis omnibus lineari oblongis curvis canaliculatis obtusiusculis. Labellum cucullatum, 3-lobum, cum columna omnino parallelum, basi inarticulatum; lacinia intermedia retusa flavescente disco luteo-glandulosa, lateralibus ovatis brevioribus violaceis; axi elevata pubescente. Columna luteo alata, obtusa, carnosa. Anthera bilocularis, longitudinaliter dehiscens, dorso conica et cum columna articulata. Pollinia 2, reniformia, postice excavata, in glandulam latam triangularem membranaceam sessilia.

1. BROMHEADIA FINNLAYSONIANA Rchb. fil. Walp. Ann. Ann. VI. p. 630. *Grammatophyllum? Finnlaysonianum* L. O. 173. *Br. palustris* Lindl. l. c.:

Herba parasitica caulescens, ebulbis. Folia disticha oblongo linearia emarginata. Spica terminalis, disticha, flexuosa, multiflora, longepedunculata, bracteis brevissimis, rigidis, dentiformibus. Lindl. B. Reg. XXX. 1844. 18. Hook. B. Mag. 4001. Wight l. c. 1740.

1480. SACCOLABIUM *Bl.*

Bjdr. 292.

I. Folia plana.

1. SACCOLABIUM CALCEOLARE Lindl. O. 223: Lindl. Sert. Front. 6:

Roots thick, smooth. Stem short, thick, compressed, entirely concealed by the sheathing bases of the leaves. Leaves close together in 2 rows, linear, coriaceous, smooth, 1' long, obliquely 1—2 toothed at the point, curved to one side as to assume a falcate appearance, thick, slightly chanelled, convex midrib underside, their sheaths are short, compressed, finely dotted with purple. Corymb short stalked, solitary or twin, each consisting of from 10 — 16 flowers with a very thick, clavate peduncle 1½' long, spotted with purple. Flowers middle sized, yellowish green, elegantly sprinkled with roundish purple dots. — Sepals spreading, distinct, fleshy and stiff, somewhat obovate, obtuse, a little narrower at the base, about 4'' long. Petals narrower, more round. Labellum large, bog-shaped, twice as large as the sepals, smooth, obtuse at the bottom, truncated and almost circular at the mouth, pale yellow; with a transverse plate of a somewhat reniform figure, inserted horizontally in front a little below the orifice of the labellum, white, yellow and spotted with purple in the middle and bearded above with white hairs. Column very short conical. Anther ovate, short, obtuse, with 2-cells, themselves half divided into 2 other cells in front extended into a long double toothed glandular process applied to the double toothed apex of the stigma. Pollenmasses 2, globose, with a little excavation one side, attached to a long slender caudicle. Nepal. Toca. Wallich.

B. Reg. XXIV. (1838.) Misc. 139: Chirra on the Khoseea Hills. 400'. Gibson. — Wight Ic. 1671: Vanda pulchella.

2. SACCOLABIUM ACUTIFOLIUM L. O. 223. (*Aërides umbellatum* Wall. Mss. Ic. 1137.): Sert. l. c. Nr. 2:

Stems are 6'' high, covered by numerous leaves in two rows. Each leaf 6'' long, sessile, slightly amplexicaul, oblong-lanceolate, very acute, quite flat and even, and apparently fleshy. Flowers in small corymbs, placed on stiff peduncles, from 2—3'' long, springing from the stem on the side opposite a leaf. They are about ¾'' diam. Sepals and petals are obovate, acute, spreading, yellow, nearly of equal size. Labellum pale pink, concave at the base, where it has a rounded lobe on each side and flat beyond the lobes, enlarging into a somewhat triangular plate. Huc: *Saccolabium dentatum* Paxt. Mag. Bot. VII. 145. and B. Mag. 4772:

Caule repente radicoso, foliis linearioblongis acutissimis, racemis corymbosis folio brevioribus, sepalis petalisque subsimilibus obovato spatulatis patentibus, labelli calcare globoso amplo utrinque unidentato, perianthio aequali, laminae lato triangularis margine densissime glanduloso fimbriato, columna brevi denticulata. Khasya.

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3. SACCOLABIUM COMPRESSUM Lindl. B. Reg. XXVI. 1840. Misc. 5:

Caule juniore ancipiti, foliis distichis amplexicaulibus undulatis obtusis oblique tridentatis, racemis cylindraceis pendulis, labelli calcare falcato obtuso lamina carnosa minima dentiformi sepalisque triplo longiore.

Manilla. Cuming. Loddiges.

Drooping cylindrical racemes with small sepals blotched with crimson and a long ivory-white spur.

Sert. 32. (1840.): Old stem round, hard, pushes forth greenish white roots. Leaves 6 — 10'', seegreen, broad, strapshaped, wavy, obtuse obliquely three-toothed at the end; at the base they surround the stem, form a sheath at the base, through which the raceme pierces nearly; distichous. Flowers small, scentless in long 3-sheathed racemes. Sepals oblong, rather acute, spotted with crimson upon a ground at first white, afterwards yellow the two at the side concave round the lab,

till their points touch; that at the back forms an arch over the column which is very prominent at the back. Petals are similar in form, size, colour to the sepals, thinner, and spread at right angles from the column. Labellum chiefly consists of a long, hollow, falcate, obtuse, pendulous spur, which is free from all appendage, 3-lobed, side below being rounded, that in front more acute and fleshy. Column short, wingless, lengthened over the stigma into a narrow awl-shaped process (rostellum) to which pollenmasses adhere by means of a long, slender, subulate, chanelled caudicle and minute gland. Anther rounded, rugged, extended in front into a long awl-shaped beak, which turns upwards, following the course of rostell. Pollenmasses 2, obovate, slightly split at the beak.

4. SACCOLABIUM RUBRUM L. O. 222. Huc *Saccolabium ampullaceum* Lindl. in Wall. Cat. 7307. Lindl. Sert. tab. 17:

Caule brevissimo, foliis crassissimis distinctis ligulatis canaliculatis apice truncatis dentatis, racemis oblongis erectis foliis multo brevioribus, sepalis petalisque ovatis patentibus subaequalibus, labello angusto acuminato concavo!, calcare compresso pendulo duplo breviore.

Sylhet. Roxbghs corresp. Bemphedy. May. Wallich.

Flowers deep rose colour in erect oblong axillary racemes. Flower — stalk and ovary about 1″. Sepals and petals beautifully veined. Lip linear, falcate, twice as short as the sepals, channelled, acute, rather curved upwards at the point, with a compressed, straight, slender spur, about as long as the flower-stalk. At the base of the lip are 2 teeth, pressed close to the base of the column and parallel with it. Column short with a small hollow stigma. Anther purplish, 2-celled, ovate, obtuse, with a tooth transversely curved downwards beneath the pollenmasses on each side. Pollenmasses 2, globose, furrowed, with a long caudicle. Fig. copy. of pict. Court East Ind. Comp. — Distinguished from Saccolabium rubrum by its short erect racemes, by the form of the lip and by the leaves being regularly distichous, not at all curved to one side.

Rchb. fil. Bonpl. III. 225: Calcari anguste cylindraceo incurvo laminae aequali, callo utrinque bilobo inter lobos laterales, lamina ovata.

5. SACCOLABIUM RINGENS L. O. 221: „*Saccolab. rubrum* Lindl.“ Wight Ic. V. 1852. N. 1673:

Leaves channelled, bowed, bidentate at the apex, racemes erect, manyflowered, sepals and petals ovate, obtuse, spur of lip cylindrical, obtuse, incurved; lamina oval, acuminate, fleshy at the apex, bicorniculate at the base.

Flowers deep rose colour, leaves mottled with purple, pale on the under surface. Neilgherries. I am not sure that I understand Lindley's character of the lip, especially the „base bicorniculate“.

6. SACCOLABIUM WIGHTIANUM L. O. 221. Cf. Walp. Ann. I. 791. Rchb. fil. Bpl. III. 225:

Calcari amplo subancipiti laminam labelli paulo excedente, carina emarginato biloba inter lobos laterales erecta, lamina ligulata.

Wight l. c.: Epiphyte on branches of trees. From the Pulneys. Flowers rose coloured. The specimen from which the species was originally taken up were far from good, and the character is unavoidably imperfect, but sufficiently so to leave little ground to doubt, that this is the plant. I have quoted Richard (Aërides radicosum Ann. sc. nat. Vol. 15.) with a doubt, though I believe unnecessarily, his description and figure agreeing so well with my plant. The erect not recumbent column and erect, not 3-lobed lip of this plant show that it is not referable to Aërides, at least as defined by Lindley.

Huc: *Aërides radicosum* A. Rich. Ann. sc. nat. 15 p. 65. Tab. l. c.:

Foliis equitantibus, oblongis, carnosis, coriaceis, apice obtuse bilobis; floribus

rubro lilacinis, pedunculatis, racemosis, racemo longe pedunculato, simplici aut ramoso; bracteis brevissimis, basi latis, apice acutis; calcare recurvo; limbo trilobo, lobis lateralibus brevibus, obtusis; medio subcordato, obtuso.

Desc. Planta epiphyta; radix fibris longissimis constans, pseudobulbosa, folia disticha semi-vaginantia, coriacea, lanceolata, apice biloba, basi transverse secedentia; flores rubri aut lilacini in racemum simplicem aut ramosum, ex axilla foliorum ortum multiflorum dispositi. Sepala erecta, lateralia obliqua, basi cum labello coalita; superius liberum, interiora obtusa, erecta, exterioribus vix minora; labellum cum basi gynostemii parum producta continuum, nullo modo articulatum, oblongum, trilobum, basi calcaratum, membranaceum, lobis lateralibus brevibus, obtusis, lobo medio cordiformi, obtuso, venoso; calcare longitudine limbi obtuso, venoso; gynostemium breviusculum, marginibus membranaceum et cum labello continuum; anthera unilocularis, terminalis, operculata. Pollinia 2 globosa, postice sulcata, caudicula diaphana, angusta, glandula subrhomboidea, peltata terminata, inflexa. Fructus ovoideus 3 alatus. Super cortic. arborib. parasit. in sylvis circa Otacamund. — Majo.

7. SACCOLABIUM PANICULATUM R Wight Ic. V. I. (1851.) 1676:

Leaves strapshaped, somewhat channelled, obliquely 2-lobed at the apex: panicle racemose, many-flowered, much longer than the leaves; sepals and petals suborbicular obovate obtuse, petals smaller than the sepals, lip ovate attenuate towards the point, with 2 small suborbicular lobes at the base, and a fleshy, glandlike appendage closing the throat of the spur; spur conical, about the length of the lip. Flowers nearly white a light tinge of pink, lip sheaded with crimson.

Iyamally Hills. Oct. Sept.

Approaches *S. niveum* Lindl. which is much smaller, its leaves being only 2½" long and ¼" broad — large variety?

Rchb. fil. Bonpl. III. 225: calcari arcuato lamina breviori, callo utrinque bilobo inter lobos laterales, lamina ligulata.

8. SACCOLABIUM VIRIDIFLORUM Lindl. Contrib. Orchid. Ind. p. 86. *Micropera viridiflora* Dalzell in Hook. Kew 4. Misc. III. 282:

Pollicaris, acaulis, foliis planis lineari oblongis apice bilobis, racemis basilaribus brevissimis plurifloris foliis brevioribus, sepalis petalisque conformibus aequilongis obovato-spathulatis pallide viridibus, petalis erectis conniventibus, sepalis lateralibus patentibus, labelli calcare perianthium aequante, porrecto calceiformi, laminae cucullatae submembranaceae 3-lobatae albae supposito, laminae lobis lateralibus rotundatis, intermedio triangulari acuto, cornubus in labelli margine utroque parvis conicis erectis, labelloque basi albo et roseo pictis.

Flores 5—6 l. diam., racem. 1—2 p. F. 3 p. lg., 6—8 l. l. Crescit cum M. maculata, fl. Majo. Diff. a M. pallida caule nullo.

9. SACCOLABIUM DENSIFLORUM Lindl. Orchid. 220. B. Reg. 1838. (XXIV.) Misc. 103: Manilla, Cuming, flowered with Loddiges. It has small, pale, dull brownish yellow flowers, of a very fleshy consistence. The specimen, that flowered was a small one; the Penang spec. brought home by Dr. Wallich were nearly 2' high.

10. SACCOLABIUM GEMMATUM Lindl. B. R. XXIV. (1838.) Misc. 88:

Foliis distichis semiteretibus canaliculatis subtortis apice inaequaliter tridentatis, spica ramosa, floribus minutis carnosis, sepalis conniventibus ovatis obtusis lateralibus multo majoribus, petalis brevioribus subrotundis, labello carnoso ovato crystallino dorso tuberculato marginibus calcaris conici penduli dilatatis carnosis rotundatis, columna brevissima, apice antherae hemisphaericae reflexo.

Discov. 1837 on the Khoseea hills of India by Mr. Gibson, brought to Chatsworth (Duke of Devonshire). The blossoms are the smallest of the genus not being larger than a grain of mustard seed, but the finest amethysts are not of a more brilliant purple, and the tips of the labellum and sepals are quite white.

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11. SACCOLABIUM BIFIDUM Lindl Bot. Reg. 1838. (XXIV.) Misc. 5:

Racemo pendulo gracili multifloro, petalis basi obscure hastulatis, labello recurvo hastato, apice setaceo fisso; laciniis basi linearibus obtusis erectis.

Small, oblong, flat, distichous leaves, and a slender pendulous raceme, 4'' long, of pale pink and yellow small flowers in the form of their lip not unlike our wild Man-Orchis. Loddiges received it from Manilla, where it had been collected by Mr. Cuming and flowered in December. — Flores parvi, Ribesios rubri magnitudine. Perianthium explanatum, ochraceum, sepalis linearibus obtusis; petalis minoribus, basi obsolete hastulatis. Labellum albidum, subrecurvum subtriangulare, apice setaceo-bifidum basi hastatum, lobis linearibus, obtusis apice purpureis, erectis, columna longioribus, calcare intus nudo cylindraceo, ochraceo, apice compresso, pendulo, ovario duplo breviore. Columna nana, alis duabus linearibus obtusis porrectis stigma marginantibus. Anthera hemisphaerica, mutica, pellucida, antice truncata. Pollinia postice excavata ab apice brevi glandulae tenuis cuneatae acuminatae pendulae.

12. SACCOLABIUM QUINQUEFIDUM Lindl. in Hook. Lond. Journ. of Bot. 1843. II. 238:

Foliis coriaceis distichis ligulatis (auriculatis) apice rotundatis oblique emarginatis, panicula ramosa ramis ascendentibus multifloris, floribus minutis, labelli quinquefidi lobo medio lineari obtuso lateralibus utrinque duobus acutis inaequalibus ascendentibus, calcare obtuso sepalis paulo longiore.

A plant with the habit of Sarcanthus paniculatus but with extremely small flowers. The leaves are coriaceous, shining, about 8'' long by 1'' broad. The panicle is 1½' long and fully 8'' in diameter. There is no difference whatever between this and the common forms of Saccolabium. The genus Carteretia must therefore be cancelled. — Guinea Hinds? Videtur.

Huc: *Carteretia* A. Rich. Voy. Astrol. tab. 4:

Perigonii foliola exteriora latiora basi oblique ascendentia acuta, supremum paulo angustius, subconcavum obtusum, interiora paulo minora, obtusa; labellum columnae parallelum, basi in calcar productum, tripartitum, laciniis erectis intermedia trifida, columna ovario continua, brevis, semiteres; anthera bilocularis antice apiculata, pollinia 4 incumbentia.

C. paniculata A. Rich. l. c.: parasitica, foliis radicalibus, oblongis (pedalibus), apice bifido bilobis, lobis obtusis glaberrimis, integerrimis inferne plicatis, scapo tereti superne ramoso (bipedali) vaginis quibusdam adpressis subobliquis vel truncatis brevibus, floribus in apice ramorum sparsis subspicatis, parvulis, dilute viridibus brevissime pedicellatis resupinatis, bracteola brevi persistente stipatis, calycis obliqui laciniarum exteriorum superiore subconcava obtusiuscula, lateralibus oblique ascendentibus, basi paulisper productis et inter se connatis, subovalibus, acutis, laciniis interioribus brevioribus, oblongis, membranaceis obtusissimis, labello concavo basi cum gynostemio articulato.

13. SACCOLABIUM PUMILIO. Huc: *Oeceoclades pusilla* Lindl. Orch. 237.

14. SACCOLABIUM FLEXUOSUM. Huc: *Oeceoclades flexuosa* Lindl. Orch. 236.

15. SACCOLABIUM JERDONIANUM. Huc: *Taeniophyllum Jerdonianum* Wight l. c. 1736:

Caulescent; leaves linear; spikes ramous, manyflowered, bracts ovate, acute, exceeding the pedicels; sepals broad ovate, petals narrow, linear

lanceolate, spur large saccate, lip undulate, poll. 4, attached to a large elongated gland.

Malabar. Jerdon. On braches of trees. Really a Taeniophyllum?

16. SACCOLABIUM WALKERIANUM. Huc: *Sarcanthus Walkerianus* R. Wight Ic. V. (1851). 1686:

Erect? Leaves linear, channelled, strapshaped, very oblique and twolobed at the apex; raceme erect, shorter than the leaves, few-flowered, flowers long pedicelled; posterior sepal larger, galeate, spur large (lip saccate) plates of the lip nearly obsolete, the anterior one toothlike. Flowers minute, pink with a bright green spot on the anterior lobe of the lip.

The larger pollenmasses red, the smaller ones yellow.

Nuera Ellia, Ceylon; on trees. Flowers August. Mrs. Walker. — No plate is the spur.

II. Folia teretia.

17. SACCOLABIUM FILIFORME. Huc: *Sarcanthus filiformis* R. Wight l. c. 1681:

Pendulous, leaves terete, filiform, racemes ascending, much shorter than the leaves, narrow lanceolate, posterior one larger, petals ovate, orbicular, obtuse, much larger than the sepals, lip threelobed, lateral lobes erect, obtuse, middle one ovate, acute, reflexed, spur slightly recurved, obtuse, as long as the flower, capsule sub-cylindrical, clavate. Flowers orange-yellow, streaked with darker crimson lines.

Anamally forests, pendule from branches. Sep. Oct. Cotton. (Civil Engineer.) Capsula huc?

Timeo, ne sit lusus ejusdem plantae:

Sarcanthus roseus R. Wight l. c. 1685:

Pendulous leaves round, subulate, of very firm hard texture; raceme spicate, ascending, compact; anterior sepal lanceolate, acute, posterior one linear obtuse, petals broad, orbicular, spur of the lip straight, inflated at the point, produced into an ovate fleshy plate with a large globose callosity at the base, gland of pollen large, capsule small, ovate. Flowers rose coloured, petals green at the base within.

Neilgherries, near Neddawullim. Aug. Sept. — No plate in the spur!

1480/b. RHYNCHOSTYLIS *Bl.*

Bijdr. 286.

1. RHYNCHOSTYLIS RETUSA Rchb. fil. Me judice tota copia varietatum innumeris lusibus transitus offert, ut ex foliorum apicibus ac labellis nullos possis evincere characteres.

a. guttata: foliis oblique seu recte retusis. *Rhynchostylis guttata* Rchb. fil. Bonpl. II. 93. — Lindl. Sert. sub 47. (sub Saccolabio guttato.) De Vries. Illust. t. 14. — *Rhynchostylis retusa* Bl. Bijdr. 286.

b. praemorsa: foliis apice praemorsis. *Rhynchostylis praemorsa* Bl. l. c. — *Saccolabium Blumei* Lindl. Pescat. tab. 21.

Saccolabium Blumei Lindl. B. Reg. XXVII. 1841. Misc. 115:

Foliis longis canaliculatis arcuatis acutis mucronatis, racemis pendulis densifloris obtusis aequalibus, sepalis ovatis, petalis oblongis duplo angustioribus, labelli calcare compresso obtusiusculo intus pubescente, lamina oblonga rotundata ciliata emarginata utrinque costata.

Beautiful. Obtained from Java by Loddiges and in all probability the Rhynchostylis retusa of Blume. Very near Saccolabium guttatum, but the racemes are shorter and thicker, the leaves are acute, not unequally terminating in a kind of mucro, truncate, and the flowers are very differently pointed; each sepal and petal has a bright streak of violet below the apex, and the lip is deeply stained with the same colour except the tip which is white.

Saccolabium Rheedii R. Wight Ic. V, (1851). 1745. 1746. (tab. sign. Saccolabium guttatum): leaves linear, channelled, denticulato truncated or premorse at the apex; raceme pendulous densely manyflowered, posterior sepal ovate, lateral ones unequal sided, about twice the breadth of the lanceolate acute petals; spur saccate, conical, hairy on the throat, lamina of the lip broad, obcordate cuneate, spreading, capsula obovate subterete. Flowers pale pink dotted with deeper coloured spots, lip deeper pink.

c. macrostachya: foliis rotundatis.

Saccolabium macrostachyum Lindl. Sert. sub 47. 1841. (*Rhynchostylis retusa* Blume Bijdr. 286):

Foliis longis ligulatis apice rotundatis emarginatis racemis pendulis longissimis multifloris brevioribus, sepalis oblongis, petalis duplo angustioribus, labelli calcare compresso, lamina oblonga unguiculata obtusa.

Phillippines. Manilla. (Cuming.) Java.

2. RHYNCHOSTYLIS VIOLACEA Rchb. fil. Bonpl. II. 93. Huc: *Saccolabium violaceum* Rchb. fil. in litt. et l. c. Huc: *Vanda violacea* Lindl. B. Reg. XXVII. (1841.) Misc. 32. — 1847. t. 30:

Foliis canaliculatis oblique abscissis rotundatis, racemis multifloris densis pedunculatis, sepalis obovato-oblongis obtusis planis incurvis, petalis multo angustioribus, labello oblongo apiculato plano, venis 5 crassis, sacco intus pubescente.

A pretty epiphyte sent from Manilla. Loddiges. The flowers are in short racemes rather large, with an ivory white ground spotted with bright violet; of the latter colour there is one large blotch within the extremity of each sepal and petal, and a few small dots are scattered over their surface; the lip is wholly violet. The flowers have a faint and rather disagreeable smell.

3. RHYNCHOSTYLIS GURWALICA Rchb. fil. Huc: *Saccolabium gurwalicum* Lindl. Ind. Orch. Cont. II. p. 33.

1482. CLEISOSTOMA *Bl.*

Bjdr. 362. Tab. 27.

1. CLEISOSTOMA ROSEA Lindl. Bot. Reg. XXIV. (1838.) Misc. 150:

Caule folioso, foliis anguste lanceolatis coriaceis acutis, corymbis paucifloris subsessilibus, sepalis lateralibus oblique ovatis acutis, supremo petalisque linearibus obtusissimis, labello carnoso lobo medio rotundato lateralibus crassissimis transverse truncatis, dente operiente lineari acuto.

This little plant has small pale straw-coloured flowers with a pink lip, and in habit resembles Sarcanthus rostratus. It was sent by Mr. Cuming to Mess. Loddiges from Manilla.

2. CLEISOSTOMA MACULOSA Lindl. O. 227. B. R. XXVII. (1840.) Misc. 67:

Habit of a small Vanda, with longstalked spikes of small yellowish brown and pink roundish fleshy blooms. Ceylon Lodd. imp.

3. CLEISOSTOMA DECIPIENS Lindl. B. Reg. XXX. (1844.) Misc. 16:

Foliis distichis loratis oblique emarginatis leviter undulatis, spicis recurvis compositis, sepalis petalisque oblongis rotundatis, labelli lamina rotundata transversa sacco subventricoso pubescente.

This little epiphyte, which was received from Ceylon by Col. Fielding, is so like Saccolabium micranthum, that it might be easily mistaken for it. The one is however a genuine Saccolabium, the other a true Cleisostoma. S. micranthum has pink flowers with a tooth proceeding from the base of the blade of the labellum; C. decipiens has dirty ochre coloured flowers with a tooth springing from the back of the spur just below the column. It is an insignificant plant.

4. CLEISOSTOMA LATIFOLIUM Lindl. B. Reg. XXVI. (1840.) Misc. 127:

Foliis oblongis obtusis apice subaequalibus bilobis, floribus paniculatis; ramis simplicibus rigidis; petalis sepalisque linearibus obtusis, labelli calcare ventricoso lamina reniformi dente membranaceo bilobo.

A Vanda-like O. from Sincapore. Lodd. imp. Very like Cl. latifolium, but has broader leaves and there are differences in the form of the labellum. Its flowers are yellow bordered with red, small and densely arranged. It is pretty, but not strikingly so.

5. CLEISOSTOMA FUSCUM Lindl. Journ. Hort. Soc. V. 80:

Foliis oblongis distichis canaliculatis apice rotundatis emarginatis, pedunculo elongato multo brevioribus, panicula parva contracta, brachiis basi nudis, floribus congestis subcorymbosis, sepalis petalisque oblongis obtusis, labelli trilobi laciniis lateralibus erectis rotundatis intermedia ovata acuta laevi, calcare intus antice carnoso gibboso dente dorsali plano erecto truncato eroso.

Leaves 9 inches long, by 1$^1/_4$ broad. Flowers dull, dingy, yellowish brown, much like those of C. latifolium, in a close panicle, on a long, dusky peduncle, fleshy and numerous. Sepals and petals oblong, spreading, very obtuse; lip yellow with a blunt sac; its front division ovate and flat, the side ones shorter, rounded, erect. Inside is a large fleshy callus, which projects into the cavity; the dorsal tooth is like that of Cleisostoma latifolium, except that it is shorter and truncate, not bifid. Perhaps a mere variety of it.

6. CLEISOSTOMA BICOLOR Lindl. in Paxt. Fl. G. II. 99. Xyl. 185:

Scapo elongato simplici apice tantum florido, sepalis lateralibus truncatis angulatis, intermedio parvo ovato decurvo, calcare crasso brevi scrotiformi saccato, appendice membranacea triangulari bidentata.

Upper sepals linear, oblong, straight; lateral more blunt, falcate, rounded. Flowers pink and yellow. — Manilla.

7. CLEISOSTOMA LANATUM Lindl. Journ. Hort. Soc. IV. 164. (1849):

Foliis latis obtuse bilobis, racemo denso ramoso foliis multo longiore, bracteis ovatis concavis reflexis, rachi et ovario lanatis, sepalis carinatis, labelli didymi scrotiformis glaberrimi lobis erectis acutis intermedio ovato concavo bisetoso, caudicula cuneata bifida elongata.

Raceme much longer than the leaves. Flowers very small. Ind. Continent.

8. CLEISOSTOMA CRASSIFOLIUM Lindl. Paxt. Fl. G. III. tab. 99. p. 125:

Foliis carnosis canaliculatis arcuatis rigidis, paniculae simplicis ramis dense spicatis nutantibus, labelli lobis lateralibus minutis erectis intermedio subrotundo dente utrinque runcinato, calcaris dente parvo obtuso carnoso.

Veitch. — Moulmein? — Lem. Jard. Fl. t. 397.

9. CLEISOSTOMA CALLOSA Bl. Bijdr. 362. Rchb. fil. Bonpl. III. 219. (*Pomatocalpa spicatum* Kuhl und van Hasselt):

Folium loratum apice obtuse et inaequaliter bilobum, torsione verticale, septem pollices longum, duos latum. Pedunculus carnosus viridis purpureo guttulatus. Bracteae lanceae reflexae, infimae ovariis vix breviores. Sepala et petala carnosa ligulata obtusa subpatula. Labelli saccus obtuse peruliformis; lobi laterales supra ostium erecti retusi, lobus medius ovatus acutus. Callus geminus aureus in ostio antico calcaris pone ipsam lobi medii basin; lacinia postica exorta in parte superiori parietis postici, ascendens antrorsum linearis, apice retuso erosulo denticulata. Gynostemium humile, crassum. Androclinium immersum. Rostellum apice bidentatum. Anthera dilatata in apicem triangulum subito contracta. Pollinia depresso globosa, extrorse sulcata in pariete postico. Caudicula linearis. Glandula elliptica arrecta. Perigonium carnosum, stramineum, guttulae striaeque atropurpureae quaedam in sepalis externe, praecipue in basi. Flores illis Saccolabii micranthi subaequales. Aus Java, cultivirt zu Herrenhausen.

10. CLEISOSTOMA DISCOLOR Lindl. Bot. Reg. XXI. 1845. Misc. 61:

Foliis oblongis canaliculatis oblique truncatis, racemo paniculato, labello trifido utrinque plicato lobo medio carnoso obtuso, intus bituberculato dente dorsali indiviso carinato, calcare oblongo obtuso.

A little inconspicuous plant obtained from India by Mrs. Loddiges. The flower-stem is long, slender, dull purple and branched at the extremity. The sepals and petals are dull yellow, with a green tinge, the spur is nearly white.

11. CLEISOSTOMA AMABILE Tijsm. and Binnd. Naturk. Tijdsr. Ned. Ind. 1853:

Caulescens, foliis lanceolatis distichis apicibus contractis subulatis carnosis, spicis pendulis, phyllis perigonii externis obovatis obtusis, internis minoribus, labelli calcare calceoliformi limbo sagittato.

Salak.

12. CLEISOSTOMA LONGIFOLIUM Tijsm. and Binnd. Naturk. Tijdk. Ned. Ind. 1853:

Caulibus pendulis, foliis loricatis apice inaequali retusis, racemis densifloris, phyllis perigonii ovatis acutis supremo obtusiusculo, labello saccato carnoso dentato inflexo intus bicornuto.

1498. ECHIOGLOSSUM Bl.

Bijdr. 364. Tab. 28.

1. ECHIOGLOSSUM MUTICUM Rchb. fil. Bonpl. III. 225:

Labelli lobo medio sessili hastato apice retuso linea media basilari ecarinato.

Panicula gracilis. Pedunculus atroviolaceus viridimaculatus glaber minute bracteatus. Ovarium pedicellatum bractea multo longius. Perigonium carnosulum illi Sarcanthi rostrati subaequale, atroviolaceum albidumque (ex floribus jam valde emarcidis). Sepala et tepala angustiora oblongoligulata angusta obtusa. Labellum basi ima gynostemii lateribus adnatum prope eboraceum: partitiones laterales falcatae tumoribus in calcar cylindraceum pedicello aequilongum descendentibus; callus canaliculatus ligulatus apice utrinque sigmoideus, utroque latere pulvinari puberulo auctus in pagina postica calcaris. Gynostemium semiteres, oblique retusum; androclinium triangulum, supra foveam utrinque lobo descendenti bicrure; labium semirotundum sub fovea productum. Caudicula triangula bicruris crure utroque apice libero retuso viscinoso. — Seit 1826 war Echioglossum verschollen. Von Java eingeführt von Herrn Consul Schiller.

2. ECHIOGLOSSUM QUARTUM:

Sepalis extus verruculosis, summo fornicato, tepalis ligulatis obtuse acutiusculis, labelli laciniis posticis semiovato rhombeis erectis, lacinia media hastato triangula uncinata, carina serrulato denticulata per medium in septum calcaris prope completum descendente, calcari conico, tumore sub columna maximo. — Java. Lobb.

1489. SARCANTHUS *Lindl.*

Coll. Bot. t. 39. B.

a. Folia teretia.

1. SARCANTHUS FILIFORMIS Lindl. B. Reg. XXVIII. (1842.) Misc. 69:

Foliis filiformibus, racemis 7—8-floris, sepalis petalisque reflexis, labello apice ovato fauce utrinque bidentata, apice calcaris didymo, columnae facie glabra.

Flowers very small, chocolate coloured sepals and petals and a pale yellow lip tipped with pink. Near S. teretif. India imp. Wallich. — Hook. B. Mag. 4689. — Lem. l. c. t. 266.

2. SARCANTHUS TERETIFOLIUS L. O. 234. B. M. 3578.

b. Folia plana.

3. SARCANTHUS RACEMIFER Rchb. fil. Mss. Huc: *Saccolabium racemiferum* L. O. 224. — *Sarcanthus pallidus* Lindl. Bot. Reg. XXVI. (1840.) Misc. 185:

Foliis distichis coriaceis ligulatis apice oblique retusis, panicula multiflora ramosa multo brevioribus, labelli lobo medio solido tereti incurvo.

India, sent by Gibson for the Duke of Devonshire. Foliage of Aerides odoratum. Flowers are small, pale, by no means beautiful, although extremely numerous and arranged in a panicle a foot and a half long. They are about the size of S. teretifol., of a dirty greenish white, with a faint purple streak through the middle of each sepal and petal and with the intermediate lobe of the lip dull yellow.

Huc: *Sarcanthus tricolor* Rchb. fil. Bonpl. III. 219:

Aff. S. paniculato, floribus duplo minoribus, lobis labelli posticis cuspidatis, lobo medio triangulo laevi, calcaris ostio nudo.

Habitus S. paniculati. Folia magna rigida. Panicula valde effusa. Flores minuti illis S. rostrati aequales. Sepala ligulata et tepala dimidio minora atrofusca, flavo marginata et aeque per medium striata. Labellum de lateribus gynostemii descendens, antrorsum trilobum. Lobi laterales dentes cuspidati, lobus medius triangulus excavatus apice acuto inflexo; calcare cylindraceo didymo, callo triangulo basi inferiori emarginato per discum unicarinato in ostio superiori calcaris laevis. Cultur der Herren Booth und Söhne in Flottbeck, jetzt im Besitz des Hrn. Consul Schiller

Obs. Lobus medius labelli ab ill. Lindley falsissime teres dictus, dum triangulus depressus. Hinc speciem iterum descripsi.

4. SARCANTHUS PENINSULARIS Dalzell in Hook. Kew. G. Misc. III. 343:

Caule simplici tereti flexuoso folioso pendulo!, foliis lineari acuminatis crassis coriaceis subtriquetris, racemis oppositif., folio dimidio brevioribus, labelli calcare perianthii longitudine cornuto, obtuso, pendulo complete biloculari, fauce callis duobus clausa, limbo brevi integro ovato obtuso crasso carnoso erecto, facie interiore sulcato perianthio breviore.

Perianthium subpatens, diam. 5 lin. Sepala et petala conformia, obovata, flava, purpureo marginata; sepalum supremum in columnam incumbens. Pollinia bipartibilia, glandula in appendice rostelli horizontalis sphaerica. Dentes in labelli utroque margine parvi, truncati. Labellum b. albo violaceo pictum. — Crescit in arboribus pr. vicum Virdee in regno Warreensi; fl. Jul. et Aug.

Huc: *Sarcanthus pauciflorus* Wight Ic. V. (1851.) 1747:

Leaves linear, acute; spikes simple, pendulous, few flowered, much shorter than the leaves; sepals obovate, acute or somewhat boatshaped, inflexed on the margins: petals narrower, obovate lanceolate; spur infundibuliform, conical, curved outwards; lamina of the lip 3-lobed, lobes all obtuse, the middle one much shorter, larger.

Sepals pale yellow, with a red margin, lip white or slightly tinged with yellow. Malabar. Jerdon.

5. SARCANTHUS OXYPHYLLUS Wall. in B. Reg. XXVI. (1840.) Misc. 123:

Calcutta imp. flowered in the garden of the Hort. soc. and proves to be nothing more than a narrow-leaved variety of Sarcanthus rostratus, a species of no beauty, long since introduced by the Hortic. soc. from China.

6. SARCANTHUS DEALBATUS Rchb. fil. Mss. Huc: *Cleisostoma dealbatum* Lindl. B. Reg. XXIX. (1843.) Misc. 5:

Foliis linearibus canaliculatis carnosis dealbatis, spicis simplicibus glaucis, sepalis petalisque rotundatis, labelli calcare ovato emarginato lobis lateralibus acutis intermedio ovato carnoso multo majore incurvo, columnae dente bilobo.

An O. pl. of little beauty, obtained from Manilla by Mssrs. Loddiges, through Mr. Cuming. — The flowers before they expand are almost white, when open they are bright yellow, with a white lip; but they are too small to produce much appearance.

7. SARCANTHUS PUGIONIFORMIS Rchb. fil. Huc: *Angraecum pugioniforme* Klotzsch Mss. in Ind. sem. Berl. 1858:

Caulescens; foliis distantibus, lanceolatis, crassis, coriaceis, unicostatis, basi attenuato-excavatis, margine tumidis, apice pungentibus; spica oppositifolia, pendula, versus apicem incrassata, multiflora; bracteis persistentibus, minutis, ovatis, acutis, fuscis, patentibus; floribus parvis, sessilibus; perigonii foliolis anguste obovatis, brevissime acutis, ex albido-flavescentibus, sordide rubro-bistriatis, interioribus paululum minoribus; labello subcarnoso, trilobo, calcarato, lobis lateralibus acutissimis rectis flavescentibus, lobo medio dilute lilacino cavo acuto; calcare pendulo, conico, emarginato, albo, ovarii longitudine; gynostemio albo, perbrevi; pollinariis 2 orbicularibus, bipartibilibus; caudicula filiformi; glandula alba, bipartita.

Caulis compressiusculus, crassitudine pennae cygneae, 9 pollices longus. Folia primum conduplicata, deinde plana, 8 pollices longa, 6—7 lineas lata, atro-viridia, costa subtus prominente. Spica 7 pollices longa. Flores 4 lineas in diametro. Germen 2 lineas longum.

Caracas. Wagener.

Obs. Ipsissimus Cl. Bouché, inspector Horti Schoenebergensis me certiorem fecit, plantam a domino Low Londinensi indicam missam fuisse. Locus caracasanus igitur omnino aeque fictus, ac tot alia. Rchb. fil.

1490. PODOCHILUS *Lindl.*

Orch. 234.

(*Podochilus* Bl. Bjdr. 295. — *Platysma* Bl. Bijdr. 295. — *Apista* Bl. Bijdr. 296.)

1. PODOCHILUS MALABARICUS Wight l. c. 1748. 2

Leaves short, fleshy, imbricating, obtuse, spike terminal, short, few-flowered, drooping, bracts broad ovate, somewhat cuspidate, shorter than the ovary, petals somewhat narrower than the sepals, lanceolate, lateral sepals connate forming a short ventricose spurious spur; lip entire, constricted in the middle, upper half linear lanceolate, obtuse.

Malabar. Jerdon.

1491/1. (Endl.: 1369/2). APPENDICULA *Bl.*

Bijdr. 297. Tab. 40.

1. APPENDICULA MICRANTHA Lindl. Ann. N. H. V. 1845. p. 386:

Foliis distichis, ovato-oblongis obtusis, spicis axillaribus solitariis nutantibus folio brevioribus, bracteis subulatis reflexis, labello ovato acuto.

This has the smallest flowers of any, I have examined. It is near Blume's App. reflexa, which is said to have an obtuse mucronate lip.

2. APPENDICULA BIFARIA Lindl. Hook. Lond. Jour. VII. 35:

Foliis bifariis oblongis emarginatis mucronulo interjecto, floribus terminalibus, labello oblongo appendice circulari membranacea et dente ovato in laminam.

Dendrobium bifarium Wall. Lindl. gener. et sp. Orch. p. 81.
Dendrobium emarginatum Reinw. ic. ined.

Tolerably abundant in ravines of Mount Gough, in August. Among the plants I include under the present name, the specimens, that have come under examination being generally destitute of flowers. The definition given is made to suit the plant found by Major Champion the flowers of which I have insufficiently studied. Major Champion says they are pure white; Reinwardt's artist represents them as large and stained with rosecolour, and his leaves resemble those of the Philippine form. Rumphius' Angraecum purpureum primum, referred here in the „genera and species" although an Appendicula, belongs to one of those with lateral inflorescence. Griffith's Mss. has made him give two totally different plants, and he says that one of them comes from Affghanistan! a country, in which no epiphyte is capable of existing.

Obs. Haec sint. Equidem in ipsissima Lindleyi domo notavi: „Dendrobium bifarium est Appendicula haud extricanda, similis „*Dendrobio manilensi* Schauer."

3. APPENDICULA LEWISII Griff. Calc. Journ. IV. 1844. p. 378:

Caulibus ancipitibus simplicibus, foliis anguste lanceolatis bifidis cum mucrone interjecto, racemis oppositifoliis, foliis brevibus, labelli erecti lamina oblongo cordata, processu sacci semi-cyathiformi antice deficiente, sacco laminam longitudine aequante.

Habit.: Insula Penang.

Descr. Caulis spithamaeus, vel subpedalis, anceps. Folia bifaria, anguste lanceolata, inaequaliter bifida, mucrone interjecto, univenia, pallide viridia. Racemi oppositifolii, subcernui, pauciflori, foliis breviores. Flores minuti, resupinati, albidi. Bracteae membranaceae, angustae, ovarii longitudine. Perianthium connivens, membranaceo-cellulosum. Sepala oblonga, subacuta, lateralia basi valde obliqua et cum

pede columnae connata. Petala conformia, paullo minora. Labellum suberectum, cum columna valde continuum; lamina integro ovato-cordata, acuta; saccus magnus rotundatus, auctus processu semicyathiformi medium versus affixo postice libero. Columna nana basi longe producta, sursum purpureo fusca. Clinandrium profunde excavatum dente postico, antheram affingente magno, introflexo. Anthera ovato-cordata, membranacea, subimmersa, in stigmate postico rostello incumbens bilocularis, antice tridentata. Pollinia 8, clavata, cerea, in glandula oblonga carnosa sessilia. Stigma posticum (rostellum) obliquum, sublinguiforme, bifidum; stigmatis apertura verticalis. Capsula oblonga, tricostata, pallide brunnea

Flos habitusque Sarcanthorum, columna et stamen Neottiarum.

This species may perhaps be Blume's Appendicula anceps, but his characters are too short and have little reference to the flowers to admit of his species being determined with any satisfaction. I have therefore dedicated it to Mr. Lewes, Assistent Resident, Penang, who introduced it with other plant into this garden, where it flowered, March last. It appears to thrive in pots with leaf soil mixed with broken pots.

4. APPENDICULA PURPURASCENS Bl. Bijdr.: De Vriese Illust. t. 12. fig. 1.

5. APPENDICULA MEMBRANACEA Tijsm. and Binned. Natuurk Tidjsch. N. Ind. V. 1853:

Caulibus compressis, foliis oblique emarginatis, obtusiusculis, floribus foliis oppositis subsessilibus geminatis, phyllis perigonii lineari-lanceolatis, labelli limbo trilobato acutiusculo reflexo, capsula obovata, carnosa. — Salak.

Obs. 1. Hujus generis:

Dendrobium (*Onychium* Bl.) *manilense* Schauer Act. Leop. XIX. Suppl. p. 430.;(1845):

Glabrum, caulibus teretibus erectis vaginis laxis indutis, foliis bifariis oblongis (planis striatis) apice obliquis emarginatis mucronatis, racemis paucifloris axillaribus cernuis, folia adaequantibus, bracteolis ovatis acuminatis, flores fere occultantibus, sepalis inf. ovatis acuminatis basi obliquis et ad medium tenus connatis in calcar subsemiaequans obtusum saccatumque, sepalo superiori petalis latiori, paulo longiori, labello angusto canaliculato (?) columnam aequante medio contracto hinc in limbum ovatum acuminatum discoque crista longitudinali bicarinata insignitum dilatata.

Lucon agr. Manil. Octobri.

Herba epiphyta, semipedalis. Folia 8—12 lineas longa. Flores minuti, albidi, labelli apice discolori, saturatori. — Adest specimen alterum fructiferum vix dubie ad hanc speciem pertinens, duplo majus, racemis erectis pleiocarpis, capsulis oblongis, 6-costatis 2 lineas longis.

Obs. 2. Appendicula tomentella Zoll. Flor. 1847. p. 456. est *Eria tomentella* Rchb. fil. (*Eria javensis* Zoll. Mor. cf Bonpl. 1857. p. 55.)

1491½. CRYPTOGLOTTIS *Bl.*

Bijdr. 296. Tab. 42.

1. CRYPTOGLOTTIS SERPYLLIFOLIA Bl. l. c. Huc: *Hexameria* R. Br. Horsf. Pl. Jav. Rar. p. 26:

Perianthium erectiusculum, sepala lateralia exteriorum basi connatis et infra productis in saccum maximum calcar obtusum aemulantem. Labellum e basi calcaris ortum, unguiculatum, lamina suprema indivisa, bisecta. Columna brevissima. Anthera filamento insidens, stigmati bilobo parallela, bilinearis. Massae pollinis cereaceae in singulo loculo tres (!) quarum 2 inf. collaterales, tertia superior, omnes apice acuto affixae

corpusculo septiformi loculi longitudinaliter bipartienti et cum eodem deciduae.

Epiphyta nana; caule ramoso; foliis distichis mucronatis, basi in petiolum brevem semivaginantem attenuatis, racemis terminalibus paucifloris..

Obs. Hexameria proxima Cryptoglotti esse videtur, forsanque ab ipsa Crypt. serpyllifolia Bl. haud diversa; et si in hac necnon in Appendiculis omnibus septa mobilia decidua loculos antherarum bipartientia et massas pollinis affigentia exstant haec tria genera conjungi merentur. Numerus ternarius enim massarum, quamvis characteres insignes, et in Hexameria disticha constantes praebens, minoris certe valoris considerari debet. R. Br.

Hexameria disticha R. Br. l. c.:

Herba parvula, inter muscos parasitica, rhizomate gracili filiformi repens. Caules hic illinc e rhizomate orti, erectiusculi, filiformes, tenues, 3—4 pollicares, ramosi, a basi ad spicem usque foliorum vaginis tecti. Folia numerosa, disticha, equitantia, patentia, 2—3 lineas longa, oblique lanceolata, mucronata, glabra, nervoso-striata, basi cum vagina articulata, demum soluta et caduca. Spicae terminales, pauciflorae, floribus 3—4. Flores parvi, pedicellis patulis suffulti, singuli, bractea parva membranacea ovata, deflexa, pedicellum subtendente instructa. Perianthii foliola 6, biseriata, externa subaequalia, basi connata, late ovata, obtusiuscula, nervo medio subcarinata; anticum (ovario recte persistente directionem suam primitivam servante) paulo angustius; lateralia basi superiore connata in saccum maximum obtusum, subdidymum floris limbum explicatum, plusquam duplo superantem et calcar emulantem, interiora lateralia exterioribus paulo breviora, oblongo-linearia, obtusiuscula; posticum (labellum) inclusum, e fundo calcaris ortum, unguiculatum, lamina anguste obovata, trinervi, integerrimamque lineam bis superante, basi utrinque in setam gracilem, unguis longitudine, abeunte. Columna brevis stigmatis lobis lateralibus auriculas breves subrotundas (in sicco) emulantibus; antice profunde bifida, laciniis lanceolatis acutis. Anthera stigmati parallela, filamento brevi filiformi affixa, ovata, apice emarginata, basi cordata, bilocularis, limbis approximatis. Massae pollinis 3, in quovis loculo cereaceae, lanceolatae, septo membranaceo, lanceolato, longitudinaliter bipartienti, demum soluto et cum massis deciduo apicibus acutis affixae; duo inferiora collateralia ad utrumque septi latus; tertia superior, paulo minor et gracilior, ad ejus latus externum. Massae superiores respondentis ad septi latus internum vestigia nulla. Caudicula nulla.

Dr. Horsfield „found this little plant in the year 1817 on the declivity of one of the principal volcanos of the western parts of Java, the mountain Gede, sit about 40 miles south of Batavia, in the rich vegetable mould, covering the rocks. It appears to be peculiar to the western portion of the island."

Obs. Eadem Hexameria disticha affertur a Schauero l. c. Leop. XXIX. Suppl. p. 431.: „in insula Lucon prope Manilam urbem elegantissimam hanc plantulam Octobri legit 6. Meyen".

1492. OECEOCLADES *Lindl.*

Bot. Reg. 1522.

1. OECEOCLADES TENERA L. O. 236. Wight Ic. V. (1851.) 1668;

Caulescent, leaves oblong, fleshy, emarginate, spikes 3—4 flowered, horizontal, shorter than the leaves; posterior sepal erect, helmet-form; anterior ones leaning on the lip, equal, petals parallel to the helmet and like it all distinct at the base; lip shorter than the sepals, three-lobed, cucullate, lateral lobes erect, emarginate, truncate, middle one fleshy, threelobed, flat with 2 callosities at the bases, spur short incurved.

Flowers brownish yellow with crimson points, lip white. Nuera Ellia. Ceylon.

Mrs. Col. Walker: „ sepals and petals greenish yellow streaked with brownish red. — Lip fleshy, 3 onter lobes pure white, the other part yellow streaked with pink. Column and anthers red and yellow." Leaves thick and fleshy, on some plants larger and on others smaller than here represented.

Huc: *Oeonia? alata* A. Rich. Annal. sc. nat. 1841. p. 67:

O. caule tereti folioso, foliis alternis, basi vaginantibus, ellipticis, apice obtusis aut subbilobis, coriaceis, rarius subacutis; floribus 3—4, subsessilibus, rhachi communi parvula, persistente, alari suffultis; labello trilobo!, lobo medio productiore trilobato; lobo medio acuto, linea longitudinali prominula notato; calcare brevissimo, recurvo, appendice membranaceo, subbilobo, ad os calcaris; fructu subtriquetro, angulis alatis.

Parasitica super arbores in convallibus sylvaticis non procul a Neddubetta Nilgherries: Perrottet. Poll. non vidi.

1493. AERIDES *Lour.*

Coch. 525.

I. Folia plana.

1. AERIDES MULTIFLORUM Roxb. Fl. Ind. III. 475. (fid. Lindl. Sert.).

A. affine Wall. in L. O. 239. Lindl. Sert. 15. 1838.

A. roseum Lodd. in Lindl. Paxt. Fl. G. II. p. 109. tab. 60:

Foliis coriaceis canaliculatis distichis apice obtusis bilobis, spicis densis recurvis, sepalis petalisque longioribus angustatis acutis, labello rhomboideo acuminato, integerrimo, calcare brevi conico incurvo, ovario trialato labelli longitudine. A. affine Hook B. M. 4049. not Wall.

Aerides affine has truncated leaves, the ends of which are ever jagged, of which in A. roseum there is no sign. Sepals and petals remarkably blunt almost rounded. Lip more or less toothletted not unfrequently threelobed, partially imitating the bluntness of sepals. Ovary shorter than the lip, not half its length, spikes stiff and erect. — Lem. Jard. Fl. tab. 200. (sub A. roseo Lodd.)

Huc: *Aërides trigonum* Klotzsch Berl. Allg Gartenztg. 1855. p. 177.

2. AERIDES CRISPUM L. O. 239; B. Reg. XXVIII. (1842.) 55:

Foliis planis apice obliquis bilobis racemis multifloris nutantibus duplo brevioribus, sepalis petalisque subaequalibus obtusis, labelli maximi lacinia intermedia multo majore ovata serrulata retusa basi bidentata lateralibus erectis acutis nanis, calcare cornuto incurvo. — Courtallum — A. Brookei Bat. in Bot. Reg. XXVII. (1841). Misc. 116. — Bot. Mag. 4427.

Huc: *Saccolabium speciosum* Wight Ic. V. (1851.) 1674. 1675.

Leaves strapshaped, obliquely emarginate at the apex; panicle large, lateral branches fewflowered, terminal one long, drooping at the apex, manyflowered, sepals broad ovate elliptic, obtuse, petals rhombeo spatulate, lip threelobed, lateral ones small suborbicular, furnished with a recurved plate, middle one subtriangular, crenate, reflexed on the margins, truncate at the apex, spur tapering, shorter than the lip hooked outwards, fruit short, obconical, surmounted by perianthium.

Flowers rose coloured, fining off towards the margin, lip much deeper, approaching crimson. Paulgheat in Malabar. July. Aug.

3. **AERIDES LINDLEYANUM** Wight Ic. V. (1851.) 1677:

Leaves fleshy, coriaceous, subelliptic oblong, oblique, deeply emarginate at the apex; racemes erect, many flowered, sepals and petals obovate suborbicular, anterior sepals larger and like the lip thick and coriaceous; lip threelobed, attached to the point of the prolonged base of the column, lateral lobes small, ovate, middle one large ovate, ventricose above, crisp on the margins with a large fleshy lobe at the base, closing the spur; spur short, rigid, inflexed under the lamina; capsule large, obovate, long pedicelled. Flowers purplish lilac, deeper on the axis, fining off to a nearly white in the margins; lip the same, but much deeper. — Kartairy Falls below Kaitie; also on rocky clepts on a high hill over Conoor.

4. **AERIDES MACULOSUM** Lindl. B. Reg. XXXI. (1845.) 58:

Foliis coriaceis planis apice obliquis obtusis, racemis densis nutantibus subpaniculatis, sepalis subrotundo-oblongis, petalis conformibus duplo latioribus, labello ovato subundulato integerrimo basi utrinque unidentato tuberculo indiviso interjecto, columna brevissima.

More like A. Brookei, than any plant, but flowers distinctly panicled, not shortly racemose; then they are smaller; moreover, their column is short and the lip neither crisp, nor toothed, nor saddle backed, but quite entire and nearly flat, little lobes at the base of the lip are also different; in Brookei they stand at right angles with the column, here they are very small, and direct themselves towards the point of the lip. — Labellum rose. Colour of this much less vivid; it has more the tint of affine, has very little white and both sepals and petals are spotted all over with light purple. — *A. maculosum* var. Schroederi Henfr. Gardn. Mag. Bot. 392. Lem. Jard. Fl. 54. Pesc. t. 36.

5. **AERIDES FALCATUM** Lindl. Paxt. Fl. G. II. 142:

Foliis coriaceis distichis obtusis apice obliquis mucronatis, racemis densis pendulis, multifloris, labelli tripartiti laciniis lateralibus falcatis obtusis, intermedia obovata fissa ciliata convexa basi bicristata multo angustioribus et brevioribus, calcare brevi cum labello parallelo.

East India. Habit of A crispum; sepals and petals are white with a crimson speck at the point; lip is crimson in the middle, white barred with rose at the edge and on the lateral lobes.

Obs. A. Larpentae Hort. fid. Rchb. fil.

6. **AERIDES TESTACEUM** L. O. 238. Huc: *Vanda parviflora* Lindl. B. Reg. XXX. (1844.) Misc. 57:

Racemo simplici, sepalis oblongis, petalis linearibus spathulatis, labelli trilobi lobis lateralibus ascendentibus acutis, intermedio oblongo canaliculato spongioso bilamellato apice circulari denticulato, calcare angusto obtuso.

Bombay. The flowers are small, pale ochre-coloured, with a lip sprinkled all over with extremely fine purple points; the middle lobe of the lip is rather spongy, has 2 broad ridges, between which runs a channel, and at the point it is almost exactly circular, with a few small toothings. 4 pollenmasses adhere to a narrow strap connected with a broad gland; but the rostellum is not in any degree extended into a beak. Habit, as I am informed, of Vanda lamellata.

Aërides Wightianum Lindl. Wight Ic. V. (1851) 1669 (in tabula sub Vanda parviflora): leaves strapshaped, oblique at the ape, obtuse, 2-lobed, with a tooth between, racemes straight, simple, manyflowered, longer than the leaves; sep. and petals oval, the anterior ones larger; lip funnelshaped, lateral lobes adnate to the foot of the column, the middle one subcuneate, roundish, trilobed at the apex; disk crested with several elevated crisp lines; spur short, conical. Middle lobe of lip deep lilac, capsule club-shaped sixangled; flowers yellow. Ivamally Hills, Coimbatore. Aug. Sept.

Aërides testaceum L. O. 238. Paxt. Fl. G. II. 142:

Foliis loratis acutis bilobis, inter lobos cuspidatis, racemis strictis simplicibus multifloris, foliis longioribus, sepalis petalisque obovato oblongis obtusis, labelli infundibularis laciniis erectis, obtusis, intermedia lineari patente apice dilatata reniformi biloba dentata lineis 2 elevatis callosis in disco, calcare conico incurvo.

Ceylon on trees. Peduncles spotted. Flowers the size of A. Wightianum, pale yellow, with a violet spot in the middle of the lip. Capsule clavate, sixangled.

Aërides Wightianum Lindl. Paxt. Fl. G. II. p. 143:

Foliis loratis apice obliquis obtusis bilobis inter lobos cuspidatis, racemis strictis simplicibus multifloris, foliis longioribus, sepalis petalisque ovalibus anticis majoribus, labelli infundibularis laciniis lateralibus pedi columnae adnatis obtusis intermedia subcuneata apice biloba rotundata, disco lineis pluribus elevatis crispis cristato, calcare brevi conico.

Iyamally Hills, Coimbatore. Leaves strapshaped, oblique at the base, obtuse, twolobed, with a tooth between. Racemes straight, simple, manyflowered, longer than the leaves. Sepals and petals oval, the anterior one larger. Lip funnelshaped, lateral lobes adnate to the foot of the column, the middle one subcuneate, roundish, trilobed at the apex; disk crested, with several elevated crisp lines. Spur short, conical. Middle lobe of the lip deep lilac. Flowers yellow.

7. AERIDES ODORATUM Lour. Cochin. 525. Lindl. Paxt. Fl. G. II. 143:

Foliis flaccidis apice obtusis obliquis, racemis pendulis multifloris foliis longioribus, labelli cucullati infundibularis laciniis lateralibus erectis cuneatis rotundatis, intermedia ovata acuta inflexa, calcare conico incurvo.

Common in hottest part of India; also in China and Cochinchina. — Flowers white, pink at the point, fleshy, very sweetscented. — B. R. 1485. — B. Mag 4139. — Floral Cab. II. 75.

8. AERIDES VIRENS Lindl. Bot. Reg. XXIX. (1843.) Misc. 48 et XXX. (1844.) Tab. 41:

Foliis latis oblique retusis, racemosis pendulis multifloris, sepalis petalisque obovatis obtusis, labelli cornu acuminato ascendenti, lobis lateralibus apice denticulatis, intermedio lanceolato, medio canaliculato versus apicem denticulato.

Java. Flowers sweetscented as large as those of A. odoratum, white, stained and spotted with deep lilac. Its leaves are remarkable for their bright green colour.

Lindl. Paxt. Fl. G. II. 143: according to Blume his A. suaveolens is this species, but its small rosecoloured flowers are not such as we see in this country.

9. AERIDES SUAVISSIMUM Lindl. Journ. H. Soc. IV. 264. et Lindl. Paxt. Fl. G. II. 141: Tab. 66:

Racemo oblongo horizontali multifloro, bracteis nanis ovatis scariosis, sepalis petalisque ovalibus obtusis patentissimis, labello cornuto ascendente columnae adpresso trilobo, laciniis lateralibus oblongis subdenticulatis, intermedia lineari bifida sublongiore. — Lem. l. c. t. 217.

Huc: *Aërides flavidum* Lindl. Paxt. Fl. G. II. p. 101. N. 372:

(A. quinquevulneri facie) labelli cornuti laciniis lateralibus rotundatis integerrimis, intermedia breviore bifida glabra.

Flowers glutinous, very fragrant. Lip quite different from that of any species, with which we are acquainted, lateral lobes rounded and entire, while the middle lobe is much shorter and twolobed. Of the lip the horn is green; lobes pale yellow; sepals and petals dashed with pink.

10. AERIDES QUINQUEVULNERUM Lindl. Sert. 30:

Foliis ligulatis apice rotundatis oblique emarginatis, apiculo interjecto, racemis pendulis multifloris foliis longioribus, labelli cucullati infundibularis laciniis lateralibus erectis intermedia oblonga inflexa denticulata, calcare conico incurvo.

Cuming misit ex Philippinis.

Nearly allied to A. odoratum, but it wants the delicious fragrance, and yet it has a pleasant aromatic odour. Flowers have 5 purple blotches and the middle lobe of the lip is serrated; in all which circumstances the two spec. disagree.

Stem, leaves, mode of growth of Aërides odoratum. Sepals and petals fleshy, firm, roundish, white, with a few purple speckles near the base and a rich crimson stain at the apex, the lateral sepals much larger than the upper or the petals. Lip funnelshaped, curved inwards at the base of its spur which is conical and green; with its mouth it presses against the column, which is embraced by its 2 lateral lobes, which are white speckled with purple; middle lobe is oblong, convex, serrated, deep crimson with a white edge and pressed close the anther.

Obs. In Paxt. Fl. G. II. 143. affertur quoddam *Aërides pallidum* Lindl. Orch. 18., quod tristis mixtura ex Sarcochilo pallido nostro (citatur nempe *Dendrocolla pallida* Bl. Bijdr. 290. bene pro Synonymo *Aëridis pallidi* L. O. 241.) et additur ex Rumphia (cf. Walp. Ann. III. 571.) diagnosis *Aëridis pallidi* Blume, quod verissimum Aërides. — Additur locus: „Timor, on trees, also Philippines, Cuming. Flowers showy, white. Lip with transverse pale coloured bars. Spur yellowish at the tip. Flowers very sweet, like lily of the valley. Rchb. fil.

11. AERIDES DIFFORME Wall. in L. O. 242. Sert. frontisp. 7. (Descriptionem omittimus, quae eadem ac illa l. c.)

Obs. *Aërides tessellatum* Wight in L. O. 240. Doubtful plant. Specimens of Wallich: loose flowers of Vanda Roxburghii and leaves of some plant unknown." — „*Aërides appendiculatum* Wall. C. 7315. — *Aërides taeniale* L. O. 7. — *Aërides difforme* Wall. Sert. probably represent so many genera" Lindl. in Paxt. Fl. G. II. 110. — Quae de Aëride tessellato dicta, ea in herbario Lindleyano probe vidi. — Methodus autem ex difficilibus vix cognitisve speciebus genera nova efficiendi, non probanda. Rchb. fil.

II. Folia teretia.

12. AERIDES CYLINDRICUM L. O. 240. Wight I. e. 1744:

Leaves round, somewhat cylindrical, racemes short, about two-flowered, sepals ovate, obtuse, petals oblong, broader; lip cucullate, funnelshaped, lateral lobes oblong, obtuse, adnate to the middle; ovate, obtuse, fleshy, middle one; spur straight, conical.

Flowers white or slightly tinged with red, lip reddish, middle lobe yellow at the base. Iyamally Hills, Coimbatore on branches. Aug. Sept. — Lindl. Paxt. Fl. G. 142.

1495. AERANTHUS *Rchb. fil.*

Aëranthus Lindl. B. Reg. 817. — Mystacidium Lindl. Comp. B. Mag. Fasc. 19. p. 206. — Angrecum Lindl. ex part. — Oeonia Lindl. ex part.

§. 1. Planifolia.

1. AERANTHUS FRAGRANS. Huc: *Angraecum fragrans* Thouars Af. t. 54. Gard. Chronicle 1850. p. 599:

The leaves of Faham, known also by the name of Fahon or Fahum leaves, are imported from Mauritius. They are obtained by Angr. f. It is much sought after by the

Asiatics on account of its fragrance. It is sufficient to touch the fresh leaves for the fingers to remain impregnated with their aroma. The dry leaves, which occur in commerce have an odour of Vanille. Alcohol and aether separate the aromatic principle, boiling water removes a slightly bitter principle and a mucilaginous substance besides in the aroma. In the country whence they are derived and come in France a very agreable tee is prepared from them, which is used as a digestive and even recommended in disease of respiration organs. Mixed with ordinary tee they impart to it an extremely agreeable perfume.

2. AERANTHUS GLADIIFOLIUS. Huc: *Angrecum gladiifolium* Thouars O. Afr. t. 53. Lindl. B. Reg. XXVI. (1840.) 68:

Caulescens, foliis distantibus lanceolatis acutis, pedunculis axillaribus unifloris, floris patuli phyllis omnibus ovato-lanceolatis acutis, calcare gracili pendulo, pedunculo subaequali.

Perigonium candidum. Bourbon and Madagascar and Mauritius, where it seems to have been first met with by Commerson. It was afterwards collected by Du Petit Thouars and others. Flowering in February.

3. AERANTHUS VOLUCRIS. Huc: *Epidendrum volucre* Thouars l. c. 81. *Oeonia Auberti* Lindl. B. Reg. 817.

4. AERANTHUS MACROSTACHYUS. Huc: *Epidendrum macrostachys* Thouars l. c. 83.

5. AERANTHUS FILICORNIS. Huc: *Mystacidium* Lindl. Comp. B. Mag. fasc. 19. p. 206:

Perianthium patens, aequale, petaloideum. Labellum calcaratum, cum columna articulatum, limbo indiviso. Columna brevis recta, carnosa, semiteres, apice utrinque processu longo lineari instructa. Rostellum ovatum, elongatum, convexum, nudum. Anthera membranacea, bilocularis. Pollinia dorso excavata, caudicula longa bicruri; cruribus filiformibus glandulis tot membranaceis peltatim insertis.

Epiphyta habitu Angraeci.

Mystacidium filicorne Lindl. l. c.
Limodorum longicorne Sw.
Angraecum capense L. O. 248.
Epidendrum capense L.

Vischrivier; super arbores prope Enon. Drege. Planta epiphyta, tota palmaris, brevissime caulescens. Folia disticha obtusissima, semipoll. lata, oblique emarginata. Racemus multiflorus, subsecundus, ab ima basi floridus. Sepala et petala lineari lanceolata, apice recurva. Calcar filiforme, apice infundibulare, sesquipollicem longum, arcuatum, dependens. Limbus labelli lineari lanceolatus, carinatus, basi gibbosus. Anthera apice truncata, brevis, rostellum nullo modo tegens. Appendices columnae lineares canaliculatae, diaphanae, obtusae, seriebus pluribus papillarum purpurearum transversis quasi barbatis.

With the habit of Angraecum this curious little plant has characters of so marked a kind as render it impossible to combine it with that genus. The curious two-legged caudicula each point of which is inserted in the middle of a transparent gland, the naked rostell on which the legs of the caudicula are placed without any protection from the anther, and the two very curious bearded appendages that stand forward from the upper angles of the column, are all at variance with the structure of Angraecum and its allies. Aëranthus, Oeonia, Cryptopera are sufficiently different.

Obs. Moneo, in copia florum callos in labelli basi nullos adesse. Hinc non est Epidendrum capense. Rchb. fil.

6. AERANTHUS PECTINATUS. Huc: *Angrecum pectinatum* Thouars l. c. 51. etc. Hook. B. J. I. p. 48. Tab. CXVI.

7. **AERANTHUS POLYSTACHYUS.** Huc: *Angraecum polystachyum* Lindl. Bot. Reg. XXVI. 1840. sub 68:

Caulibus ramosis, foliis distichis ovalibus coriaceis oblique bidentatis, spicis oppositifoliis flexuosis multifloris, foliis paulo longioribus, bracteis orbiculatis ciliatis, sepalis basi et apice ciliatis, labello subrotundo cuspidato, calcare vesiciformi.

A caespitose plant, throwing out long roots from the lower part of its stem, whose branches are only 2—3" long. A spike of very minute flowers proceeds from opposite every leaf.

Peru. Matthews 1905. (Herb. Hooker.)

8. **AERANTHUS MICRANTHUS.** Huc: *Angraecum micranthum* Lindl. B. Reg. XXI. (1836.) 1772:

Caule brevi, foliis oblongis trinerviis apice obliquis, spicis secundis multifloris horizontalibus, congestis, foliis brevioribus, sepalis petalisque subaequalibus anguste ovatis apice patulis, labello conformi basi bilobo bidentato medio pubescente, calcare obtuso incurvo postico.

Caulis 2 pollicaris. Folia 1½ pollices longa, 1½ pollices lata, plana, crassa. Flores minuti, albi. — Sierra Leone.

9. **AERANTHUS ORGANENSIS.** (*Angraecum organense* Rchb. fil. Mss. in Herb. Lindl.):

Caule brevi, foliis oblongoligulatis apice oblique obtuseque bilobis, spicis distichis multifloris abbreviatis, bracteis ovatis minutis ciliolatis ovaria pedicellata subaequantibus, sepalis tepalisque ligulatis obtuse acutis, labello aequaliter tridentato, calcari incurvo apice vesicato ovario pedicellato subaequali. Organ Mountains: Miers.

10. **AERANTHUS LANSBERGII.** Huc: *Angraecum Lansbergii* Rchb. fil. Orchid. Lansb.

11. **AERANTHUS SCHIEDEI.** Huc: *Angraecum Schiedei* Rchb. fil. cf. Walp. Ann. III. 572.

12. **AERANTHUS JAMAICENSIS** Rchb. fil. et Wullschl. Huc: *Angraecum jamaicense* Rchb. fil. et Wullschl. Mss.

Caulis vaginis tessellatim rugulosis (arpophyllaceis), foliis ligulatis inaequaliter obtuseque bilobis valde crassis superne vernixiis, spicis paucifloris abbreviatis, bracteis minutis triangulosemiovatis, sepalis tepalisque ligulatis acutis, labello oblongo apiculato seu obtusangulo quadrato antice medio apiculato, calcari cylindraceo ovarium aequante, in capsula matura curvulo brevissimo.

Ab Aerantho micrantho, cum quo infaustissime confusus est, foliis vernixiis florumque fabrica longissime distat. — Arb. Fairfield Jamaicae. Wullschlägel.

§. 2. Dolabrifolia.

13. **AERANTHUS DISTICHUS.** Huc: *Angraecum distichum* Lindl. Bot. Reg. XXI. (1837.) 1781:

Caule imbricato, foliis distichis compressis recurvis obtusis supra canaliculatis, floribus solitariis axillaribus, pedunculis foliis subaequalibus; sepalis ovatis petalisque angustioribus secundis obtusis, labello postico oblongo concavo apice tridentato, calcare tereti horizontali pedunculo breviore.

Caules 3 — 4" longi, atrovirides. Folia densissime imbricata. Flores parvi, lactei carnosi, inodori. Labelli dentes laterales rotundati, intermedio recto acuto. — Sierra Leone. Loddiges imp.

§. 3. Aphylli.

§§. a. Grandiflori.

14. AERANTHUS LINDENII. Huc: *Angraecum Lindenii* Lindl. Gard. Chron. 1846. p. 135. Lindl. Orch. Lind. p. 12. N. 67. 1846:

Aphyllum, acaule, radicibus numerosissimis intricatis, sepalis petalisque lanceolatis, labelli trilobi cucullati lobo medio bilobo mucronulo interjecto, laciniis longissimis caudatis divaricatis, calcare longissimo filiformi, capsula ovali laevi stipitata.

This remarkable plant is a true parasite, if we can judge from the manner in which its roots are planted upon the bark of trees, to which they seem inherent. The flower of the purest white is sometimes a foot in length, including the spur up to the point. When out of flower it is difficult to discover the plant, so much do the roots assume the colour of the bark in which they grow. Found Septbr. 1840 at St. Yago de Cuba, in the dense forests of Sagua and Nimanima.

Judice Rchb. fil. sic definiendus ob sequentem speciem:

Sepalis tepalisque triangulis obtuse acutis septemnerviis subaequalibus, labelli late trilobi lateligulati lobis lateralibus ante medium obtusangulis minutis, lobo medio a basi lata divergenti bicruri, cruribus semifalcatis sexnerviis.

15. AERANTHUS SALLEI:

Sepalis tepalisque lineariligulatis acuminatis septemnerviis, labelli lati trilobi latoligulati lobis lateralibus acutangulis elongatis, lobo medio ligulato, longiusculo apice trifido, lacinia media triangula parva, laciniis lateralibus lanceo subulatis quadrinerviis.

Domingo. Sallé! (Forsan huc pertinet specimen Schomburgkianum domingense herbarii Lindleyani).

16. AERANTHUS FUNALIS. Huc: *Angraecum funale* Lindl. „Gard. Chronicle" &c. Hook. B. M. 4295. *Oeceoclades funale* L. O. 237. *Epidendrum funale* Sw. Pr. 126. *Limodorum funale* Sw. Occ. 1021. *Trichocentrum? funale* Lindl. B. R. XXIII. (1837.) sub 1950. Hook. l. c.:

Subacaule aphyllum, radicibus copiosis elongatis crassis, cylindraceis, hic illic articulatis, pedicellis subbifloris, sepalis petalisque oblongo lanceolatis reflexis, labello trilobo, lobis lateralibus parvis erectis, intermedio maximo late obcordato bifido, calcare filiformi perianthio bis longiore.

Jamaica. Purdie. Perigonii sepala et tepala viridula. Labellum albidum luteomarginatum.

§§. b. Parviflorus racemosus.

17. AERANTHUS FASCIOLA. Huc: *Angraecum fasciola* Lindl. B. Reg. XXVI. (1840.) sub 68:

Aphyllum acaule, radicibus longissimis flexuosis, spicis erectis multifloris distichis distantibus, sepalis petalisque linearibus acutis, labello membranaceo petalis adnato, apice brevi triangulari, calcare pendulo obtuso inflato laevi.

A small leafless plant with the habit of A. tenue, only the flowers are much larger, although very small, and distinctly distichous. It answers to the short character we possess of Limodorum Fasciola, a plant I have never seen; but as the latter is a native of the Society Islands it is probably distinct. Demerara. Schomburgk (herb. propr.) — Cf. etiam Hook. Lond. Journ. II. 1843. 678.

§. 4. Acifolii.

18. AERANTHUS ORNITHORRHYNCHUS. *Angraecum ornithorrhynchum* Lindl. Bot. Reg. XXVI. (1840). sub 68:

Foliis acicularibus, spicis oppositifoliis brevibus paucifloris (5—6), sepalis petalisque lineari-lanceolatis acutis, labello ovato apice triangulari subcarnoso, antherae apice elongato obtuso membranaceo, calcare tereti ascendente ovario longiore

Resembling A. subulatum in habit, but quite different in its flowers. — Saint Catharina in South Brazil. Twedie (herb. Hooker).

1496. CRYPTOPUS *Lindl.*

B. Reg. 817.

CRYPTOPUS ELATUS Lindl. l. c. Hook. Bot. Journ. I. 45. Tab. CLX:

Caulis ut videtur erectus, elongatus, simplex, crassitie pennae cygneae, subuncialis hic illic fibris elongatis, rigidis, flexuosis, simplicibus instructus. Folia disticha, coriacea, brevia, 12‴ longa, 6‴ lata, basi vaginantia, apice oblique emarginata. Pedunculus saepe bipedalis, erectus, teres, apice racemoso subpaniculatus. Flores laxi, remoti, majusculi. Bracteae ad basin pedicellorum nigro fuscae, membranaceae, amplectantes, obtusissimae. Sepala patentia, demum reflexa, omnia unguiculata, exteriora spathulata; obtusa, 2 lat. lamina lata, triloba; lobis lateralibus lanceolatis, acutis, subrecurvis, intermedio fere obcordato, cum mucrone. Labellum superum sepalis paulo brevius, 4-lobum, apice mucronatum; lobis inferioribus minoribus falcato-recurvis, superioribus plusquam duplo majoribus, horizontaliter patentibus, lineari-oblongis rectis, apice obtusis, bifidis; segmentis valde obtusis calcare basi dilatato saccato longissime attenuatum, curvatum. Germen gracile, rectum, in petiolum vix angustiorem attenuatum. Columna brevis antice utrinque superne dente ovato vel lobo dilatata. Clinandrium planum, antice tridentatum, in sinubus dentium glandula (pollinis?) magna, cupuliformis, viridis, in caudam latam dense bilobam attenuata, subtus lamellifera. Stigma quadratum depressum. Anthera subbiloba hemisphaerica, antice bifida, unilocularis, primum membrana (dein erumpente) tecta. Massae poll. 2 obovato subrotundae, nigrescentes, semibilobae.

1496/1. DENDROPHYLAX *Rchb. fil.*

Mss. in litt. ad cl. Grisebach.

Sepalum summum oblongum. Sepala lateralia oblongosemilunata, obtusa. Tepala ovata obtuse acuta. Labellum a basi brevissima cuneata trifidum, laciniae posticae obtusangulae parvae divaricatae, lacinia media ab isthmo brevi dilatata pentangulo antrorsum dilatata, antice sinuato emarginata, biloba, carina erecta obtusangula ascendens inter lacinias posticas et per isthmum; calcar cylindraceo-filiforme ovarium pedicellatum adaequans. Columna brevis, reclinata, utrinque in alam rhombeam ascendentem expansa. Anthera antrorsum rostrata. Pollinia gemina, depressa, postice perforata. Caudicula papulis sericeis hispida glandula supposita.

DENDROPHYLAX HYMENANTHUS Rchb. fil. in litt. ad cl. Grisebach, qui misit sub Wright 1692, Cuba. „*Oncidium usneoides* Lindl." Radices adventitiae filiformes multum flexae. Folia —. Pedunculus filiformis, sursum ramulo elongato aequali furcatus, vaginis arctis paucis. Calcar et pedicellus muriculis minutissimis parvis obsiti. Flos illi Ionopsidis paniculatae aequimagnus, imo labello excepto comparabilis. — Videtur igitur una cum Oncidio usneoide lectus.

1498. ANGRECUM *Rchb. fil.*

Angrecum P. Thouars O. Afr. ex p. — Aërobion Spr. Syst. III 716. ex. p. — Angraecum L. O. 245. ex p.

1. ANGRECUM SUPERBUM Thouars l. c. 62. 63. 64. Huc: *Angr. eburneum* Lindl. Bot. Reg. XVIII. (1832.) 1522. Paxt. Mag. 1849. XVI. p. 90. B. Mag. 4761:

2. ANGRECUM EBURNEUM Thouars l. c. 65. Huc: *Angr. virens* Lindl. 1847. sub 19. Lindl. Paxt. Fl. G. p. 25. 26. xyl. Cf. Walp. Ann. I. 792. Ibi nescio quo anglico lapsu ex Seharampore venisse dicitur.

3. ANGRECUM BRONGNIARTIANUM Rchb. fil. Pescatorêa I. 16:

Affine A. superbo Thouars (eburneo Lindl.): foliis lato-ligulatis, quam pedunculus brevioribus, bracteis minoribus, sepalis petalisque lanceolatis longe acuto-acuminatis, labelli carina basilari in lineam elevatam discum usque procurrenti, calcari filiformi tenui labello plus duplo longiori.

Planta speciosissima validissima. Caulis basi articulationem manus virilis crassus Folia latoligulata, margine paulo undulata, apice obtuse acuta, latere altero obtusato, altero subito angustato inaequalia, subbipedalia, tres uncias lata. Pedunculus validus, bene ultra bipedalis, portione inferiori vaginis retusis brevissimis quinis longe distantibus vestitus, supra racemosus. Bracteae cucullatae ovatae, ovario plus duplo breviores. Ovarium cum pedicello tortum. Perigonium bene coriaceum. Sepala ac petala lanceolata bene acuto acuminata, petala et sepala lateralia demum reflexa. Labellum utrinque semirhombeum, apice trilobum, lobis lateralibus obtuse triangulis, lobo medio lanceo-cuspidato; carina depressa rhombea in lineam excurrens in disco labelli. Calcar angustissime filiforme acutum, labello plus duplo longiore. Gynostemium brevissimum crassum, dimidio superiore antrorsum protensum. Androclinium immersum antice marginatum, per discum unicarinatum. Fovea transversa apice a lobis inflexis gynostemii tecta. Anthera depressa mitrata apice excisa, intus bene bicamerata. Pollinia depressa ovata, extrorsum profunde bisulca sessilia in caudicula ligulata brevi adhaerente, glandula peltata. Perigonium et gynostemium viridia, labellum album.

4. ANGRECUM BILOBUM Lindl. B. Reg. XXVI. (1840.) Misc. 151:

Caule brevissimo, foliis cuneato-obovatis oblique bilobis reticulatis racemo verrucoso pendulo multifloro multo brevioribus, sepalis petalisque lanceolatis patentibus, labello conformi paulo majore, calcare filiformi emarginato breviore.

A lovely Orchid with long drooping racems of snow white flowers, just tipped with pink and slightly sweetscented. It has singular, netted, obovate leaves, clove at the point, and slightly sprinckled with small tubercles. Lodd. imp. Cape Coast Castle. —

Bot. Reg. XXVII. (1841.) tab. 35:

Anthera cristata, unilocularis. Pollinia duo excavata, alba. Glandula alba. Rostellum trans stigma, quod antice in sinum recedit, arcte deflexum, marginique sinus attingens superficiem stigmaticam in duabus partibus dividere videtur.

Huc: *Angraecum apiculatum* Hook. Bot. Mag. 4159:

Caule brevi radicante, foliis distichis obovato-lanceolatis, oblique acuminatis opacis striatis racemo pendulo laevi (everrucoso) multifloro multo brevioribus, sepalis petalisque lanceolatis patentibus, labello conformi paulo latiore, calcare filiformi integro breviore, antherae crista eglandulosa.

I was at first disposed to consider it the same with *A. bilobum* Lindl. Bot. Reg. 1841. t. 35: but that has semipellucid, reticulated leaves, distinctly and deeply two-lobed at the extr., the rhachis of the raceme and peduncle are warty and the spur is dilated and emarginate at the apex. Anther case hemisph, indistinctly twolobed, with a mucronate crest at the top, not granulated like that of bilobum

Sierra Leone.

5. ANGRECUM CAMPYLOPLECTRON Rchb. fil. Bonpl. III. 226:

Aff. Angr. bilobo Lindl., racemo multifloro, sepalis tepalisque ovatis obtuse acutis, labelli lineariligulati lobis basilaribus obtusangulis erectis parvulis, calcari cylindraceo sigmoideo obtuso, laminam labelli subduplo excedente ovario pedicellato tertia breviori, pollinario A. bilobi.

Von Herrn Consul Schiller eingeführt.

6. ANGRECUM ARACHNOPUS Rchb. fil. Bonpl. II. 93:

Aff A bilobo Lindl. duplo gracilius, omnibus perigonii phyllis senis subaequalibus linearilanceolatis acuminatis, gynostemio graciliore.

Pedunculus ultrapedalis filiformis rariflorus, subflexuosus. Sepala ac tepala lineari lanceolata, acuminata, labellum subaequale, calcar filiforme pedicellum prope bis superans; gynostemium gracile, stigma medium usque, limbus infrastigmaticus integer; anthera obtuse conica, androclinii limbus subinteger. — Goldküste

7. ANGRECUM BICAUDATUM Lindl. in Comp. B. Mag. Fasc. 19. p. 205:

Caulescens, foliis distichis lineari-oblongis, oblique bilobis, spicis horizontalibus, multifloris, foliis brevioribus, sepalis ovatis, obtusiusculis, petalis angustioribus labello tripartito plano, laciniis lateralibus intermediae ovatae aequalibus linearibus apice multifidis, calcare recto cylindraceo ovario triplo longiore.

In collibus calcareis Kopje, prope Zwart Kopsrivier.

Parva species, epiphyta. Caulis tripollicaris. Flores minuti; bracteis brevissimis, membranaceis, obtusissimis, amplexicaulibus. Labelli laciniae laterales caudam apice pilosam simulant. Columna brevissima.

A very curious little species, with the habit of A. palmiforme, next which i might be arranged.

8. ANGRECUM ARMENIACUM Lindl. B. Reg. XXV. (1839). Misc. 109:

Caulescens, foliis distichis canaliculatis apice oblique et acute bidentatis, spicis lateralibus horizontalibus secundis, sepalis ovatis, petalis linearibus, labelli trilobi laciniis lateralibus acuminatis intermedio triangulari longioribus, calcare pendulo clavato basi compresso calyce duplo longiore.

Sierra Leone. Loddiges.

Flowers uniform apricot-colour, small, secund, closely arranged in a horizontal lateral spike. Habit is that of a Saccolabium. Very different from all Angreca, but has some affinity with A. mystacinum. The spur is twice as long, as the calyx, compressed at the base, and when inflated a little so as to appear clavate.

9. ANGRECUM VESICATUM Lindl. B. Reg. XXIX. (1843.) Misc. 9:

Acaule, foliis canaliculatis recurvis spicae pendulae aequalibus, floribus distantibus divaricatis, sepalis ovatis, petalis linearibus acutis, labello ovato acuto, calcare arcuato ovario longiori, apice inflato diaphano.

From the Ashantee country, whence it was obtained by Mr. Loddiges. It bears white, inconspicuous flowers, whose spurs look like a horn with a semitransparent bladder at the end. It seems to range next to A. caulescens from the Isle of France

Adduntur species haud bene cognitae haec:

10. ANGRECUM CONCHIFERUM Lindl. Bot. Mag. Comp. I. 205:

Pygmaeum, caulescens, foliis distichis linearibus, inaequaliter bilobis, vaginis verrucosis, pedunculis filiformibus unifloris, sepalis petalisque setaceo-acuminatis reflexis, labello semi-infundibulari repando crenulato membranaceo, calcare horizontali longissimo filiformi.

Outniqualand in sylvis. — Drege.

Caulis pollicaris sesquipollicarisque. Folia coriacea, plana, pollicaria. Bracteae ovatae, cucullatae, membranaceae. Flos magnus in tam parva specie, calcare et labello simul sumptis 2 poll. longis.

A most curious little species, of which I have seen only single flowers, the pollenmasses of which had fallen away. The sepals and petals are quite membranous, the lab. is of the same texture; and looks like one valve of a tiny delicate shell, with a long tube fastened gracefully to the hinge. If this is not the very model of a Triton's trumpet, I am sure it ought to have been.

11. ANGRECUM SACCIFERUM Lindl. B. Mag. Comp. I. 205:

Acaule, foliis linearilanceolatis distichis obtusis oblique emarginatis, scapis subtrifloris foliorum longitudine, bracteis subrotundo ovatis cucullatis, pedicellis filiformibus, sepalis oblongis acutis, petalis ovalis, labello cucullato ventricoso acuto, calcare brevissimo scrotiformi.

Outniqualand sup. arb. etiam inter Key et Basche. Drége. — Near the Nynna Burchell. — Belongs to the set of A. caulescens.

12. ANGRECUM PUSILLUM Lindl. B. Mag. Comp. I. c.:

Acaule foliis linearibus falcatis, striatis, acutis apice obliquis, spicis erectis laxifloris, foliis longioribus, bracteis brevibus diaphanis cucullatis, sepalis petalisque ovalis subaequalibus conniventibus, labello subrotundo-ovato acuto concavo postico, calcare recto ovario breviore.

Super arbores prope Boschrivier; Outniqualand, prope Koratra. Drége.

Species delicatula, inter muscos vegetans; facie omnino Phreatiae elegantis, sed minor.

13. ANGRECUM CLANDESTINUM Lindl. l. c. 206:

Caulescens, foliis crasissimis ensiformibus, recurvis, apice acutatis bilobis, lobo altero longissimo, spica horizontali dense semisubterranea, bracteis ovatis coriaceis rigidis, floribus nigro-pilosis explanatis, sepalis ovalis, petalis linearibus glabris, labello ovato cucullato nudo, calcare sigmoideo pendulo apice inflato.

Folia plana, 6 pollices longa. Spica crassa, 1½ pollices longa. Flores parvi, albi. Ovarium, sepala a dorso, calcar et labelli venter nigro pilosa. Labellum margine viride incrassatum. Anthera truncata, rostellum elongatum non tegens, caudicula linearis simplex; glandula linearis, acuta, adscendens. — West. Coast Afr. Lodd.

14. ANGRECUM TENUE Lindl. Bot. Reg. XXVI. (1840.) sub 68:

Aphyllum, acaule, radicibus longissimis intricatis, spicis tenuibus filiformibus erectis simplicibus, sepalis petalisque acuminatis apice reflexis, labello ovato acuto, calcare erecto, oblongo, carinato.

A multitude of very long entangled roots, without leaves form the principal part of this plant, which seems wholly destitute of leaves. The spikes are clustered, and are from 2—4 inches high. The flowers are the smallest in the genus.

On trees near Para Martius. (herb. reg. monac.)

Obs. *Angrecum purpurascens* Gardn. Chronicle 1852. 390. Quid?

Obs. Lindl. l. c. Comp. Bot. Mag. 205: Angreci species nova adest in herb. (Nr. 1269) in sylvis Outniqualand super arbores a Dregeo lecta; sed deflorata. Caulis

est pedalis, foliis distichis recurvis apice inaequalibus bilobis, lobo altero falcato, altero brevissimo.

Mr. Burchell also found this, but without flowers, near Krakakamma Lake, in the district of Uitenhage. — Species duae alterae adsunt Dregeo inter Key et Basche lectae, sed floribus delapsis non determinandae.

16. ANGRECUM APHYLLUM Thouars l. c. 73: Hook. Lond. Journ. III. 1844. p. 482; Mauritius near St. Louis Gardner!

1498/2. LISTROSTACHYS *Rchb. fil.*

v. Mohl und v. Schl. B. Z. 1852. 930:

Perigonium carnoso-membranaceum, patentissimum, phylla externa oblongo-triangula, acuta, lateralia interna acuta, basi inferiori nunc obtusangula, labellum oblongum, subacutum, ostium calcaris transversum, calcari clavato, basi nunc sulcato, gynostemium in phyllum summum reflexum, semiteres, dorsum versus apice recurvum, androclinium rotundo-excavatum, aequaliter limbatum, rostellum integrum, acutum, stigmatis fovea rotunda, magna, limbus prominulus stigma basi et lateribus cingens, pes planus, ligulatus, liber antrorsum productus uno plano situs cum labello et gynostemio; anthera mitrata, rhombea, antice acuta, vestigia dissepimentorum nulla praeter lobulos duos minutos in fundo. Pollinia oblonga, integra, caudiculae 2 clavatae, apice cupulaeformi pollinia amplectantes, basi attenuata, in glandula communi rotundata insidentia. (Ad L. Jenischianam).

I. Folia plana.

1. LISTROSTACHYS ARCUATA. Huc: *Angraecum arcuatum* Lindl. Comp. B. Mag. Fasc. 19. p. 205:

Caulescens, foliis distichis lineari-oblongis, obtusissimis emarginatis, racemis multifloris, foliis brevioribus, bracteis subrotundo-ovatis membranaceis concavis, sepalis petalisque linearibus acuminatissimis patentissimis, labello conformi carinato revoluto, calcare arcuato tereti ovario duplo longiore.

Albany paras. super arbores; etiam in colle calcareo Kopje, paras. super radices fruticum foliis multo brevioribus, magis carnosis, apice oblique bilobis; an idem? flores desunt.

Near Grahams Town, Burchell.

Folia fere pollicem lata, apice aequaliter emarginata, in sicco striata, 6 pollices longa. Racemus adscendens, 4 poll. longus. Flores carnosi. Bracteae magnae, conspicuae. Columna nana, rostello elongato, apice antherae supertecto. Pollinia 2, sphaerica, caudiculis totidem linearibus cartilagineis glandulae communi didymae cartilagineae adnatis.

The double caudicula of this plant is at variance with the true charact. of Angraecum, but I am too little acquainted with the Mauritius and Madagascar species to judge of its value. It is unaccompanied by any other peculiarity, and appears to agree with Ep. polystachyum of Thouars in that respect. The latter species is missed in Gen. and Sp. O. but should be placed next this as Angraecum polystachyum.

Lindl. Paxt. Fl. G. II. p. 120. Nr. 396. Xyl. 199.

2. LISTROSTACHYS CAUDATA. Huc: *Angraecum caudatum* Lindl. B. B. Reg. XXII. (1836.) 1844:

Foliis loratis canaliculatis emarginatis, spica radicali pendula flexuosa 4-flora, labello obovato rostrato serrulato, calcare longissimo apice bilobo.

Epiph. radices crassas, simplices, nebulosas promens. Caulis simplex, brevis, foliis loratis canaliculatis apice fissis 6'' longis, distiche imbricatis. Spica pedalis, ex axilla imorum foliorum pendula; pedunculo gracili, atroviridi, ad nodos tumido; rachi flexuosa, internodiis circiter 2 poll. longis. Ovarium sessile, fusco maculatum, basi tortum. Sepala et petala explanata, linearilanceolata, acuminata, herbacea, aequalia, basi fulva, fere 2'' longa. Labellum ejusdem longitudinis, album, petaloideum, serrulatum, cuneatum, angulis rotundatis vel potius obovatum, apice mucrone longo viridi rostratum, ima basi involutum et denticulatum, in calcar productum 9 poll. longum, fulvum, subulatum, apice (fig. 3.) obtusum et bilobum. Columna fulvo-viridis, brevis, erecta, basi (fig. 1.) crassior et angulata, sursum attenuata et marginata, gynizo plano fulvo, rostello subulato gynizo longiore. Poll. 2, postice paulo sulcata, in caudiculam longam cuneatam sessilem.

Sierra Leone. Loddiges. — B. Mag. 4370.

3. LISTROSTACHYS PELLUCIDA. Huc: *Angraecum pellucidum* Lindl. B. Mag. XXX. 1844. 2:

Acaule, foliis distichis oblongis subundulatis recurvis apice obliquis, basi equitantibus, racemis densis nutantibus axillaribus foliis brevioribus, sepalis petalisque linearilanceolatis, labello fimbriato cordato-ovato truncato, calcare brevi lanceolato porrecto, caudiculis 2 subulatis, glandula communi didyma.

Flowers delicate and transparent as if they were flakes of snow fixed by frost in the very act of melting. Each part of the lip is studded and bordered with little crystalline elevations, and the whole fabric of the blossom is as fragile as thin plates of glas. — Sierra Leone Mar. Lodd.

4. LISTROSTACHYS MONODON. Huc: *Angraecum monodon* Lindl. Paxt. Fl. G. II p. 102. fig. xyl. 187.½ magn.:

Subacaule, foliis distichis oblongis oblique bilobis, racemis angustis multifloris, bracteis minimis membranaceis rotundatis cucullatis, ovatis, acutis, labello subrotundo basi dente solitario aucto calcare crasso clavato breviore.

Smells like seeds of horse-chesnut. Flowers pink. — Pescatore.

5. LISTROSTACHYS ASHANTENSIS. Huc: *Angraecum ashantense* Lindl. B. Reg. XXIX. (1843.) Misc. 75:

Caulibus repentibus, foliis distichis coriaceis ovatis apice oblique erosis, foliis subaequalibus, floribus resupinatis, tepalis petalisque galeatis denticulatis ovato-lanceolatis, obtusiusculis, labello pandurato obtuso denticulato basi unidentato, calcare arcuato subcompresso basi constricto labelli longitudine, pollinis caudicula acuminata bipartita.

Light cinnamon coloured flowers in spikes 4'' long.

Ashantie Loddig. flowered 15/6/43.

6. LISTROSTACHYS PERTUSA. Huc: *Angraecum pertusum* Lindl. Comp. B. Mag. Fasc. 19. p. 205:

Caulescens, foliis distichis loratis oblique bilobis, spicis recurvis secundis densifloris, sepalis ovatis obtusis patentissimis, petalis paulo minoribus, labello plano obovato reflexo apiculato infra medium calcarigero, calcare clavato labello longiore.

Fol. 4—5 poll. longa, supra leviter scrobiculata infra purpureo-punctata, valde carnosa, duas tertias pollicis lata. Flores parvi, purpurascentes, dense secundi. Racem. 4—5'' long. Bracteae minimae acutae. Labellum fauce calcaris orbiculari infra medium perforatum nec ad ipsam basin ut in reliquis. — West Coast of Africa. Lodd.

a. Jenischiana. Huc: *Listrostachys Jenischiana* Rchb. fil. l. c.: perigonii albidi phyllis acutis, calcaris ostio transverso. *Listrostachys pertusa* Rchb. fil. l. c. — Bot. Mag. 4782:

Caule brevi, foliis distichis elongato oblongis rectiusculis carinatis utrinque pinnulatis apice oblique bifidis basi equitantibus, racemis densis nutantibus axillaribus, folia aequantibus, floribus imbricatis distichis, ovariis sepalisque rotundatis concavis tuberculatis, petalis ovalibus, labello apice rotundato obtuso, basi dilatato compresso, calcare clavato labelli longitudine.

A. pertusum Lindl. in Paxt. Mag. Nat. VII. 287.

b. *Pescatoriana* Rchb. fil. labello apice melius truncato: *Angraecum Pescatorianum* Lindl. Journ. Hort. Soc. IV. 263. (1849):

Foliis angustis canaliculatis oblique obtusis (lobo altero obsoleto), spicis brevibus densissimis cylindraceis, floribus extus nigro pilosis, labello cuneato truncato trilobo, calcare curvo clavato obtuso laminae longitudine.

Isle de France. Bouton.

Flowers small, seem to have been white, appear in short dense cylindrical spikes; the leaves are nearly a foot long, distichous like other Angreks, with a very oblique blunt end. The 2 pollenmasses have each caudicle and common gland.

7. LISTROSTACHYS POLYSTACHYS. *Epidendrum polystachys* Thouars l. c. Tab. 82. *Angraecum polystachys* Lindl. Comp. B. Mag. l. c. 205 nec *Angr. polystachyum* Lindl. B. Reg. 1840 sub 68.

II. Folia subulata.

8. LISTROSTACHYS SUBULATA. Huc: *Angraecum subulatum* Lindl. Comp. B. Mag l. c. 205:

Caulescens, gracile, foliis subulatis, sepalis ovatis acutis, petalis linearibus acutis paulo brevioribus, labello postico ovato cucullato crasso intus nudo, calcare recto filiformi ovario longiore. Flores parvi, albi, solitarii. Columna brevissima. Poll. Angraeci veri.

West Coast of Africa. Loddiges.

1500. AGROSTOPHYLLUM *Bl.*

Bijdr. 368. Tab. 58.

1. AGROSTOPHYLLUM HASSELTI. Huc: „*Appendicula Hasseltii* Bl." Wight l. c. 1748. 3:

Stems simple, terete; leaves broadly linear, retusely mucronulate, sheaths of the leaves edentulate; limb of the lip erect, crenulate.

Mergui: Griffith.

Fig. of entire plant is somewhat reduced.

2. AGROSTOPHYLLUM PLANICAULE. Huc: *Agrostophyllum Khasiyanum* Griff. Calc. Journ. IV. 1844. p. 378. Tab. XIX.:

Petalis lineari lanceolatis, labelli lamina obreniformi, sinu dentigero margine integro.

Eria planicaulis Wall. (sine char.) Lindl. B. Reg. 28. Misc. not. p. 8. Nr. 4.

Montes Khasiyani.

Caules aggregati, plani, basi attenuati, vaginis distichis $1/2$ amplectentibus semitecti. Folia 2—3, apicem versus caulis, linearilanceolata, basi attenuata, apice aequaliter bifida, mucrone interjecto. Spicae 2—3 florae in capitulum terminalem subnutantem paleaceum congestae, bracteis paleaceis vaginantibus sursum majorifactis vestitae

Flores minuti, viridescentes albidi, in paleis subimmersi, superiores praecociores; interdum solitarii. Perianthium ringens, posticum. Sepala oblonga, acuta, lateralia obliqua et ab labelli basi saccata. Petala lanceolata, paulo breviora, margine recurva fere conduplicata, vel semireflexa, alba. Labellum horizontale saccatum cum columna continuum, medio constrictum et transverse septatum, septo lutescente, late emarginato; lamine reniformis, emarginata, dente interjecto, aucta crista obsolete longitudinali margine crenulata subrecurva. Columna sepalis paulo brevior, medium versus gibbere valido subbilobo instructo, gradatim attenuata in pedem brevem, cum quo labellum continuum. Clinandrium tridentatum. Stigmatis labium superius (rostellum) bipartitum, parvum, inferius carnosum, magnum, revolutum; tela stigmatosa tantum subtus labium superius. Anthera terminalis, 8-locellata. Pollinia 8, oblongo obovata, in glandulam rotundam rubescentem sessilia. Ovarium rectum, costis inconspicuis. — Introduced by Mr. Gibson, during his residence on the Khasiya Hills. It succeeds well in mould with broken pots. I know it to be the Eria planicaulis of Dr. Wallich, with the authority of a drawing in the Library. The name would have been passed over entirely, had it not made its appearance, under the sanction of Dr. Lindley; and so grave are the mistakes, that may be imposed by the authority of Mss. names, which should very generally be viewed with suspicion, that this plant which differs toto coelo from Eria, and which belong to the Sect. Vandeae of Dr. L. has been characterized by that authority on the species of this difficult family as an Eria and has also been fully described by Mr. Booth, as an Eria.

Obs. Huc etiam pertinebit: *Diploconchium inocephalum* Schauer Nov. Act. Leop. XIX. Suppl. I. T. 129. Descriptio adeo inanis, ut reddenda non sit. Specimen in Museo Berolinensi adhuc inanius. Rchb. fil.

1501. CALANTHE *RBr.*

Bot. Reg. 518.

Lindl. Folia I, Fasc. VI. VII. (Novbr. 1855.) (Impressa monographia Novbr. I. 1854.):

This well-marked genus approaches Phaius very nearly, as Griffith has pointed out, but the adhesion of the pollen-masses to a separable gland is constant, unless the flowers are examined too early. Limatodis differs in having a lateral inflorescence as well as a free cucullate lip. The callosities on the lip afford excellent specific marks, but cannot be employed in the generic character, as will be evident from the following enumeration.

Specierum analysis e l. c.

§. I. *Ghiesebreghtia.* Calcar 0, v. brevissimum.

A. Calcar 0.
- *a.* Labelli lobus medius major lamellatus . . . . 1. *tricarinata.*
- *b.* „ „ „ minor nudus . . . . 2. *puberula.*

B. Calcar brevissimum.
- *a.* Labellum lamellatum.
  - lamellis 5 . . . . 3. *occidentalis.*
  - „ 3 . . . . 4. *brevicornu.*
- *b.* Labellum secus axin callosum, lobo medio maximo bilobo . . 5. *biloba.*
- *c.* Labellum nudum et petala tomentosa nana . . . . 6. *mexicana.*
- *d.* „basi cum tuberculo hirsutum" . . . . 7. *abbreviata.*

§. II. *Eucalanthe.* Calcar elongatum.

A. Labellum indivisum . . . . 8. *alpina.*

B. Labelli lobus medius maximus.

Petala retusa, sepalis diversa . . . . 9. *conspicua*.
" acutiuscula, sepalis similia.
Lab. lobus medius acutus, calcare uncinato . . . . 10. *curculigoides*.
" " subrotundus emarginatus.
basi bicallosus.
calcare clavato.
scapo multivaginato, spica rara . . . . . 11. *angustifolia*.
scapo multivaginato, spica densa . . . . 12. *clavata*.
calcare lineari.
labelli lac. lat. linearibus . . . . 13. *galeata*.
" " " minutis . . . . 14. *emarginata*.
basi triplici serie verrucosum.
verrucis subaequalibus . . . . 15. *sylvatica*.
verrucis basilaribus multo majoribus.
foliis subtus glabris, bracteis foliaceis ovario aeq. 16. *versicolor*.
" " " bracteis pedicello brevioribus 17. *Masuca*.
foliis subtus pilosis . . . . 18. *purpurea*.
C. Labelli 3—4 lobi laciniae subaequales
a. Labellum basi hispidum aut seriatim verrucosum
calcar inflexum . . . . 19. *uncata*.
" rectum.
labello aequale.
labelli lobi lat. majores; verrucae plurimae seriatae . . 20. *parviflora*.
" " " minores; paucae gyratae . . . . . . 21. *angusta*.
elongatum.
Labelli laciniae laterales maximae . . . . 22. *furcata*.
" " subaequales.
scapo vaginis dense imbricato . . . . 23. *vaginata*.
" " paucis distantibus.
floribus nutantibus campanulatis . . . . 24. *Perrotetti*.
erectis explanatis.
verrucis liberis confusis . . . . 25. *veratrifolia*.
" in cucullum connatis . . . . . . 26. *gracillima*.
b. Labellum basi callo magno dentato auctum . . . . 27. *alismaefolia*.
c. Labellum lamellatum.
lamellae 3 pone basin.
lobus medius bilobus, laciniis rotundatis imbricatis . . . 28. *discolor*.
" " emarginatus apiculatus . . . . 29. *bicolor*.
lamella 1 juxta apicem. . . . . 30. *Griffithi*.
d. Labellum bicallosum.
calcar ovario brevius . . . . 31. *speciosa*.
" " longius . . . . 32. *densiflora*.
e. Labellum basi costis tribus elevatis.
trilobum . . . . 33. *plantaginea*.
quadrilobum . . . . 34. *herbacea*.
f. Labellum basi nudum.
Inflorescentia hirsutissimima pendula . . . . 35. *vestita*.
" erecta.
labelli 4-lobi laciniis subrotundis aequalibus . . . . . . 36. *chloroleuca*.
" " " lateralibus minoribus acutis . . . . 37. *fulgens*.
D. Vix nota. . . . . 38. *odora*.

§. 1. *Ghiesebreghtia*. A. Rich. in Ann. Sc. ser. 3, III. p. 28.

1. CALANTHE TRICARINATA Lindl. Orch. Nr. 18. L. F. p. 2.

2. CALANTHE PUBERULA Lindl. Orch. Nr. 19. Griff. Ic. t. 313. L. F. p. 2:

Flowers rose-colour, with linear yellowish petals, and a purple lip. The middle lobe of the lip varies in form from linear-lanceolate and entire to obovate oblong, or lanceolate and serrate.

Wild on the mountains of Sylhet—Wallich; Khasia Mountains — Griffith, at the height of 5—6000 feet—Hooker and Thomson; N. W. Himalaya, at 5000 feet—T. Thomson; Assam—Mack; Sikkim, Dorjeeling, at 3000 feet—J. D. Hooker.

3. CALANTHE OCCIDENTALIS L. F. l. c. p. 3:

C. scapo ovarioque tomentosis, labelli basi conici lobo medio subrotundo crispo 5-lamellato.

The five lamellae planted upon a nearly orbicular lip, with a very short conical spur, plainly distinguish this. I know nothing of its colour.

Wild in the N. W. Himalaya; Sirmur, at 6—7000 feet—T. Thomson, Jacquemont.

4. CALANTHE BREVICORNU Lindl. Orch. Nr. 16. Sertum Orchid., t. 9. L. F. p. 3:

Flowers brick-red, striped with white.

Wild in Nepal — Wallich; Kamaon — Namik, at 9000 feet — Strachey and Winterbottom; Sikkim, in woods, in May, at 5—6000 feet—J. D. Hooker.

Sert. l. c. 9: 9"—1½' broad, deep green leaves gradually taper off into a sheathing foliaceous stalk, surrounded externally by several sheathing scales. Scape about the same height as leaves, smooth, round, with a few distant scales. Flower racemes generally arranged on one side of the scape; subtained by ovate-lanceolate, slightly downy bracts, longer than the pedicels. Ovary clavate, downy. Sepals and petals linear-lanceolate, spreading, nearly equal, striped with bright light red. Labellum 3-lobed, not very not much united with the column, has a very short smooth spur; lateral lobes are acute, and much smaller, than the middle one, which is obovate and emarginate, with 2-deep vertical plates incumbing down the middle towards the spur, and concealing a third, which is smaller, but longer; its col. is white, with a few reddish spots at the base. The fruit is an oblong triangular capsule, opening at the angles into 3 valves.

5. CALANTHE BILOBA Lindl. Fol. p. 3:

C. spica densa cylindracea, sepalis acuminatis patentissimis, petalis linearibus, labelli basi conici lobis lateralibus obsoletis, intermedio unguiculato cuneato bilobo laciniis acutis per axin carnoso.

Flowers in long spikes, dull wine-red. The pollen-masses are represented in a drawing among Mr. Cathcart's collection, as adhering to a wedge-shaped caudicle, as broad and nearly as long as themselves.

Wild in Sikkim, at 4000 feet—J. D. Hooker.

6. CALANTHE MEXICANA Rchb. fil. Orch. Europ., t. 355. fig. 5. 6. 7. Bot. Ztg. 1853. p. 493. L. F. p. 3:

C. spica conica, floribus omnino tomentosis, petalis nanis, labello paulo longiore obovato apiculato cornu brevi laciniis lateralibus erectis nanis.

Ghiesebreghtia calanthoides A. Rich. l. c. Lindl. in Orch. Linden. Nr. 129.

„Petals yellowish white, dotted with rose." — Linden. Although I adopt Mr. Reichenbach's view, and refer this new-world plant to the old-world genus Calanthe, it is necessary to observe, that, in its dwarf petals and lip, and in the double gland of the pollen-masses, it is sufficiently distinguishable, and more deserving of distinction than many so-called genera. Its habit is however the same as that of Calanthe.

Wild in Mexico—Galeotti, Leibold; in Cuba on the edges of the forests of Mount Liban and the Sierra Maestre, at the height of 3000 feet, August—Linden.

Obs. Citatum falsum. Etenim descripta est primum in de Schlechtendalii Linnaea 1844. 406:

Scapo erecto, foliis latis oblongis acuminatis breviore seu aequali multifloro, bracteis lanceolatis ovariis longioribus, sepalis petalisque minoribus oblongis obtusiusculis, labello ovato obtuso integerrimo puberulo calcarato, calcare tenui ovario breviore. — Mexico Leibold.

Ghiesbreghtia Rich. et Gal. Ann. sc. nat. 1845. Jan. p. 28:

Perianthium explanatum, sepala libera. Labellum cum gynostemio omnino connatum et quasi vaginam antice basi calcaratam efformans, indivisum subcristatum; vagina gynostemii apice antice biloba, basi calcarata, gynostemium breve, clinandrium marginatum, rostellum subelongatum, retinaculo oblongo terminatum. Anthera subglobosa. Pollinia 8 per 4 agglutinata, et cum retinaculo cohaerentia.

7. CALANTHE ABBREVIATA Lindl. Orch. Nr. 15. (*Amblyglottis* Bl.) L. F. p. 4:

Flowers white, in May.

Wild in Java, near the cataracts of the river Tjikundul in the mountains of Gede—Blume.

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§. 2. *Eucalanthe.*

8. CALANTHE ALPINA J. D. Hooker, Mss. L. F. p. 4:

C. spica secunda, labello subrotundo inciso basi nudo, calcare pendulo filiformi-conico duplo longiore.

Flowers greenish yellow, „scentless"; lip yellowish, very irregularly striated with red.

Wild in Sikkim, at Lachen, in pine woods, at 10,000 feet, in July—J. D. Hooker.

9. CALANTHE CONSPICUA Lindl. F. p. 4:

C. sepalis oblongo-lanceolatis aequalibus, petalis retusis paulo latioribus, labelli lobo medio obcordato basi cuneato versus columnam hispido . . . . . ., calcare compresso clavato incurvo labello aequali.

A noble species with the habit of C. Masuca and fulgens, but with flowers twice as large as in either; their colour is unknown. Leaf broad, like that of C. veratrifolia, slightly pilose beneath. Raceme short, roundish. Flowers nearly smooth, two and-a-half inches long, at least, from the setting on of the pedicel to the end of the lip. Sepals narrowly oblong, one-and-a-half inch long, acute, equal-sided, three to five-veined; petals the same length, rather broader, quite retuse. Side lobes of lip truncate recurved, middle one broadly obcordate, slightly denticulate. The surface of the base, owing to the fleshiness of the parts and the pressure into which they have been subjected, cannot be exactly ascertained. There is however no doubt that there is a line of small soft teeth, as in C sylvatica, and I believe the mouth of the spur is stopped by some large warts. The spur is remarkably club-shaped and curved like a sabre.

Among Reinwardt's Icones ineditae, is a plant with pale lilac flowers which may belong to this species.

Wild in the Philippines; Bohol—Cuming.

10. CALANTHE CURCULIGOIDES Lindl. Orch. Nr. 13. Bot. Reg. t. 8. 1847. L. F. p. 4.

Styloglossum nervosum Kuhl and Hasselt.
? *Amblyglottis pulcra* Blume Bijdr. 371.
? *Calanthe pulcra* L. O Nr. 9.

Spike erect, a feet long in vigerous specimens. Flowers bright yellow.

Wild in Malacca—Griffith; Penang and Singapore—Wallich; Java, in the woods of the mountains of Seribu—Blume.

Cf. Walp. Ann. I. p. 792.

11. CALANTHE ANGUSTIFOLIA Lindl. Orch. Nr. 12. (*Amblyglottis* Bl.) L. F. p. 5:

I have wild specimens from Mr. Lobb, in one of which the leaves are three times as broad as in the other. The spike is thin and few-flowered, with deciduous bracts. Two inflated sheaths clothe the scape. In Reinwardt's unpublished figures, where it is called Limodorum striatum, the flowers are represented as white with a pale orange-coloured lip. I find the latter to be four-lobed, with rounded equal lobes and a pair of calli at the base.

Wild in Java—Lobb; in shady places on the mountains of the province of Buitenzorg—Blume.

12. CALANTHE CLAVATA Lindl. Orch. Nr. 11. L. F. p. 5:

A fine species with primrose flowers in a dense cylindrical raceme.

Wild in Sylhet—Wallich; Khasia, at 4000 ft—Hooker and Thomson; Sikkim at 4—5000 feet—J. D. Hooker, Cathcart.

13. CALANTHE GALEATA Lindl. Fol. p. 5:

C. (racemo paucifloro secundo), sepalis petalisque galeatis, labello basi bicalloso laciniis lateralibus linearibus brevibus intermedia obcuneata calcari acuto curvo aequali.

Dr. Hooker's herbarium contains no specimen of this very distinct species, which is founded on a sketch by himself, preserved among his collections. It represents a plant with the following peculiarities. Scape rather more than a foot high, with a pair of young leaves at the base, from among which rises a nodding raceme of four flowers; the full-grown leaf is about eighteen inches long, broadly oval tapering into a channelled petiole. The sepals and petals are dull olive striped with crimson, and „converge over the anther.“ The lip is white with a rose-coloured spur. There is nothing in the genus to which this can be referred even if the few-flowered raceme and nodding flowers, which may be accidental, are disregarded. The capsules are pyriform, triangular and about one-and-a-half inch long. The drawing is dated May 9, 1848.

Wild in Sikkim, at 4000 feet, near Dorjeeling—J. D. Hooker.

14. CALANTHE EMARGINATA Lindl. Orch. Nr. 4. (*Amblyglottis* Bl.) L. F. p. 5:

Flowers large, violet, with orange-coloured callosities on the lip.

Wild in Java, in the primaeval woods of M. Gede—Blume.

Obs. Omisit cl. Lindley: Wight Ic. pl. Ind. or. III. 918. (1844), cf. tamen sub 16.

15. CALANTHE SYLVATICA Lindl. Orch. 6. L. F. p. 5.

Centrosis sylvatica Thouars Orch. afr., t. 35. 36.

B. *natalensis* Rchb. fil. in Linnaea XIX. 374.

Flowers white, gradually changing to bright yellow without fading, so that the upper part of the long spike is pure white, the lowest very yellow, the middle a delicate cream colour. Within the hollow of the column lower down than the tubercles, I find a pair of fleshy calli.

Wild in Mauritius and Bourbon—Thouars, Bouton &c.; fields in elevated situations—Bojer; La Pouce—Gardner; B. Port Natal—Rchb. fil.

The Natal plant which Mr. Reichenbach regards as a variety, I have seen nowhere. It would seem to have a more slender habit, shorter bracts, and a finer spur. — Cf. Paxt. Fl. G. I. p. 25. Nr. 33.

Obs. Calanthe versicolor b. *natalensis* Rchb. fil. ame serius pro specie, Calanthide natalensi, edita. Cf. Bonpl. IV. p. 322. Rchb. fil.

Huc ad *C. sylvaticam* Lindl.: *C. versicolor* Lindl. Sert. Orch. 42. Bot. Reg. 1844. sub 37

Wild in the East Indies, locality unknown. Flowers white, with a purple lip, changing to yellow.

Lindl. Sert. l. c.: Habit of C. veratrifolia. Leaves very broad, rather concave, when in great vigour, and as much as a foot and a half long, among them rise the stout noble scapes, round, here and there furnished with a sheathing scale, smooth near the ground, but downy over all the upper portion. Flowers quite smooth, of a deep rich violet, very acute, spreading, and rather larger than the petals, which have the same form, but are a little curved back at the tips. The lip adheres by the base to the whole edge of the column, which is unusually short, it is threelobed, the side lobes are half foveate, obtuse, and much smaller than the middle lobe, which is obovate, almost wedgeshaped, deeply split, along its middle runs a line of warts, which terminate next the column in 3 much larger oblong tubercles. Spur is curved, little thickened towards the end, about the same length as the downy ovary. — Fl. at Sion. Sept. 1840.

Lindl. Bot. Reg. l. c.:

Foliis oblongo-lanceolatis erectis concavis 7—9 nerviis, utrinque glaberrimis scapo apice pubescente brevioribus, racemo denso pyramidato, labelli columnae brevi accreti trilobi lobis lateralibus ovatis nanis, intermedio cuneato bilobo multo majore, basi bituberculato secus lineam mediam verrucoso, calcare glabro ovarii pubescentis longitudine.

16. CALANTHE MASUCA Lindl. Orch. Nr. 3. B. R. 1844, t. 37. B. M. t. 4541. L. F. p. 6: *C. emarginata* Wight. Ic. 3. t. 918.

Flowers large, purple, with three long rugged white or orange-coloured callosities on the base of the lip. The Ceylon and Java localities indicated in L. O. must now be expunged, as uncertain.

Wild in Nepal—Wallich; Sikkim—Cathcart; Nilgherries—Lobb.

Bot. Reg. XXVIII. 1842, Misc. 52. et 1844. t. 37:

Scapo erecto, foliis latis oblongis petiolatis acuminatis longiore, racemis multifloris, labello tripartito basi tuberculis seriatis 5-cristato, seriebus intermediis elevatioribus; laciniis lateralibus linearibus subfalcatis, intermedia cuneata emarginata in unguem linearem laciniis lateralibus aequalem angustato, calcare longissimo falcato clavato, columna brevi obliqua antice bifoveata, ovario pubescente.

Deep violet flowers with a rich purple lip. Nepal, Bengal, Ceylon, probably Java. — Cf. Paxt. Fl. G. I. p. 198. Nr. 187. Lem. Jard. Fl. t. 62.

17. CALANTHE PURPUREA Lindl. Orch. Nr. 2 B. Reg. 1844. sub t. 37. L. F. p. 6:

The three preceding species are very difficult to distinguish, and possibly C. versicolor, the wild locality of which is unknown, may be a mere variety of C. Masuca. What differences I most rely upon will appear from the following contrast:

	versicolor.	*Masuca.*	*purpurea.*
Leaves	smooth on both sides	pilose beneath	softly hairy beneath
Raceme . . .	close	open . . .	close.
Bracts	leafy, larger than the ovary	shorter than the pedicels .	as long as pedicels.
Sepals and Petals	white	purple . . .	purple.
Lip	broad	broad . . .	narrow.
Do. sidelobes . .	oblique	broad . . .	round.
Spur	nearly straight, not longer than the pedicel	curved, longer, than the pedicel	nearly straight, shorter than the pedicel.

I should add that for the characters of C. purpurea I am obliged to rely chiefly upon an Indian drawing, all the Ceylon specimens that I have seen being much decayed and hardly examinable, except a small uncharacteristic one in Sir W. Hooker's Herbarium, collected by Mrs. Walker.

Wild in Ceylon—Macrae, Walker.

Lindl. Bot. Reg. XXX. 1844. sub 37:

Scapo erecto foliis lato oblongis petiolatis acuminatis supra pilosis subtus tomentosis longiore, racemis laxis multifloris, labelli trilobi lobis lateralibus nanis rotundatis patentibus intermedio angusto cuneato divergenti-bilobo, calcare ovario vix breviore.

18. CALANTHE UNCATA Lindl. Fol. p. 6:

C. racemo angusto, bracteis foliaceis ovario multo longioribus, labelli basi hispidi lobis lateralibus dimidiatis acutis intermedio bilobo, calcare uncinato.

Flowers small, the lowest scarcely longer than the bracts. Spur remarkably hooked upwards. I have seen only a single specimen, sent me by Griffith.

Wild in Sikkim; Dorjeeling—Griffith.

19. CALANTHE PARVIFLORA Lindl. in Paxt. Fl. Gard. sub t. 61. L. F. p. 7:

A slender species, with a downy spike, sometimes as much as a foot long. Leaves from two and a half to four and a half inches broad. Bracts much reflexed. The lateral lobes of the lip are conspicuously larger than the deeply bifid middle one; the warts are very numerous and extend from the sinus to the base in crowded rows. The pollen-masses are almost sessile on an obovate gland.

Wild in Java—Lobb. 334.

Lindl. Paxt. Fl. G. 2:

Scapo gracili multifloro pubescente bracteis reflexis, labelli lobis lateralibus ovatis intermedio bilobo obtuso divaricato usque ad basin verrucoso, calcare glabro fusiformi pendulo sepalorum longitudine.

Java. Lobb. 334.

20. CALANTHE ANGUSTA Lindl. Fol. p. 7:

C. racemo tomentoso denso angusto, labelli lobis lateralibus intermedio bipartito minoribus, verrucis paucis gyratis, calcare subclavato apice inflexo ovario paulo longiore.

Leaves very small, not more than four inches long, petiole included. Scape a foot high and more, with a few distant ovate sheaths. Raceme very dense and narrow, with short downy ovate bracts, resembling that of C. veratrifolia on a small scale. The warts at the base of the lip form a kind of circle with two or three smaller in the middle, and one or two outside in the direction of the point.

Wild in Khasia—Lobb.

21. CALANTHE FURCATA Batem. in B. Reg. 1838. Misc. 34. L. F. p. 7:

A plant with the habit of C. veratrifolia. Flowers white. Mr. Reichenbach has rightly pointed out the fact that the spur of this species is variable, sometimes being emarginate, sometimes not, and either longer or shorter than the lip. The same fact is observable in my wild specimens. It chiefly differs from C. veratrifolia in the larger size of the lateral lobes of the lip. It is probably the Amblyglottis veratrifolia of Blume.

Wild in the Philippines—Cuming; Java—Junghuns (308), De Vriese.

Calanthe furcata Batem. Msscr. in B. Reg. l. c.

Foliis ovato-lanceolatis profunde plicatis scapo dense capitato subaequalibus, labello columna omnino adnato tripartito basi glanduloso-

cristato laciniis lateralibus semiovatis apice rotundatis, intermedio cuneato divaricatim bilobo lobis apice serratis, calcare incurvo pubescente apice furcato labello breviore.

A whiteflowered species, with a scape about a foot high, received by Mr. Bateman from the Luzon islands, where it was collected by Mr. Cuming.

Rchb. fil. in v. Schl. B. Ztg. 1852. 736:

Sowohl Exemplare von Cuming gesammelt, als solche, welche in Tetschen blühten sind dimorphisch. Entweder hat der Sporn zwei kleine pfriemliche Spitzen, oder die Spitze ist ganz flach gedrückt, zweispaltig. Hr. Bateman giebt an: „calcare incurvo pubescente apice furcato labello breviori.“ Unsere Pflanzen zeigen den Sporn länger als die Lippe, die Säulenpartie eingerechnet.

22. CALANTHE VAGINATA Lindl. Fol. p. 7:

C scapo vaginis dense imbricato, racemo denso conico tomentoso, bracteis floribus longioribus, labelli 4-lobi laciniis aequilatis obtusis crista verrucosa antrorsum hispida, calcare labello longiore.

I have only seen a solitary scape, remarkable for the very numerous loose leafy scales with which it is invested. The inflorescence is unusually dense. No leaves accompany the specimen. Possibly the flowers may appear before them, as Griffith says is the case with his C. odora (See Nr. 38).

Wild in Assam—Major Jenkins.

23. CALANTHE PEROTETTI A. Rich. in Ann. Sc. Ser. 2, XV. 68. Wight Ic. pl. t. 1664. L. F. p. 7:

Flowers delicate lilac, according to Wight, the lip with a deeper tinge. They are twice as large as in C. veratrifolia, and appear to have in all cases the sepals and petals erect, and presenting a somewhat campanulate appearance, whereas in that species the lateral sepals are completely reflexed. Differs from C. purpurea and its allies in the lateral lobes of the lip being as long as the middle one or nearly so.

Wild in the Nilgherries—Lobb; frequent in clumps of forest, in moist soil, from July to August, or even as early as May—Wight.

Calanthe Perrottetii A. Rich. Ann. Sc. Nat. XV. 1841. p. 68:

Foliis petiolatis, ellipticis, nervosis, plicatis, acutis, pedalibus aut sesquipedalibus, scapo distanter vaginato, foliis aequali aut sublongiori; spica laxiuscula; floribus lilacinis, longe pedunculatis, bracteatis; bracteis ovali-lanceolatis, pedunculi ovariique longitudine; labello trilobo, subplicato, sepalis sublongiori; lobis lateralibus angustis, erectis, subfalcatis, medio obcordato, alte bilobo, calcare gracili, labello fere duplo longiori; ovario pubescente.

Sylv. humid. circa Avalanchy. Nilgherries.

Wight Ic. V. 1664. 1665: Leaves petioled, elliptic, curved, plicate, acute, scape longer than the leaves, furnished with distant sheathing scales: raceme loose: bracts ovate, lanceolate, length of ovary: sepals and petals subequal, ovate, obtuse: lip threelobed, lateral lobes lanceolate, middle one much larger, truncately 2—3-lobed, lobes spreading; spur slender, straight, longer or about the length of the lip. Flowers light lilac, lip with a deeper tinge. — Neilgherries, frequent in clumps of forest, in moist soil, flowering July and August. I have seen it in flower in woods about Coonoor in May. Too near *C. veratrifolia* Lindl.?

24. CALANTHE VERATRIFOLIA R. Br. in B. Reg., t. 720. L. O. Nr. 1. Griffith Ic. t. 288. fig. 4. L. F. p. 8:

(A.) Flowers pure white.

(B) *discolor*. A dwarf form with a dirty brownish lip, and a pale purple central stain.

(C.) *australis*. Flowers white changing to buff.

Amblyglottis flava Blume Bijdr. 370. t. 64.

Flos triplicatus Rumph. Amboyn. VI. t. 52. fig. 2.

(D.) *comosa*. Raceme very dense; bracts broad, very downy.

C. comosa Rchb. fil. in Linn. XIX. 374.

This is a very extensively dispersed plant, varying somewhat in appearance according to soil, place and climate. The varieties above enumerated might without inconvenience be disregarded, or they might be greatly multiplied. The size of the bracts, the denseness of the inflorescence, and the degree of downiness are very variable circumstances.

Wild in many tropical parts of Asia; A. Ceylon, up to 6000 feet — Mrs. Walker; Continent of India; B. Ceylon — Macrae; C. Australia, in the Illawarra district, South of Port Jackson—A. Cunningham; Amboyna—Rumphius; Java—Blume; D. Ceylon—J. D. Hooker; Nilgherries—Rchb. fil.

Bot. Reg. XXV. 1839. Misc. 39: In Aug. 1822 whilst on excursion to the Illawarra, a coast district on the south of Port Jackson, I met with a plant in dark shaded woods, which I introduced to Kew, in the foll. year considering it a Bletia. It soon afterwards flowered in that coll. and was then ascertained to differ in no one respect from the Java plant. They have repeatedly been in flower together since that period, and on a close critical examination of the two plants, no difference could be discovered, excepting that the Australian plant is not so purely white in the flower, as the Java one; their identity is therefore clearly determined. Illawarra district, near Port Jackson (lat. 34½ S.) is therefore another locality. — New South Wales All. Cunngh.

Lindl. Paxt. Fl. G. II. 132. *Calanthe veratrifolia* var. *australis* (*Calanthe australi.* Hort.). Not purely white. Ex Moore: „spur is shorter, flowers more compact. Leaves also shorter and the plant is hardier, having stood in a cool greenhouse all the season and flowered nicely."

25. CALANTHE GRACILLIMA Lindl. Fol. p. 8:

C. racemo gracillimo pubescente, bracteis ovatis acutissimis, sepalis lateralibus subrotundis reflexis petalis angustioribus, labelli 5-lobi laciniis linearibus obtusis, verrucis paucis sub cucullo plicato latentibus, calcare recto labello longiore.

C. veratrifolia Hooker in Beechey's Voyage p. 71:

A very slender plant with a narrow raceme sometimes as much as eighteen inches long, with straight sharp narrow by no means undulated bracts and very little down The flowers are much like those of C. veratrifolia, but the lateral sepals are roundish, equal-sided and five veined, while the petals are narrower and three-veined; and the crest at the base of the lip consists of a fleshy hood beneath which lurk a few warts, terminating forwards in a narrow elevated plate. By this circumstance it is abundantly distinguished from C. veratrifolia, independent of its different habit. The only leaf in Sir W. Hooker's herbarium is more than eighteen inches long, by three-and-a-half broad, and seems to be smooth on both sides.

Wild in the Society Islands—Beechey.

26. CALANTHE ALISMAEFOLIA Lindl. Fol. p. 8:

C. foliis ovato-subrotundis longissime petiolatis subtus glaucescentibus, labelli quadrilobi laciniis lateralibus linearibus intermedia alte obcordata callo maximo carnoso tuberculato juxta basin, calcare labello vix aequali.

Leaves with much the appearance of Alisma Plantago; inflorescence nearly smooth; bracts ovate, squarrose; flowers white, tinged with pink, except the sepals,

which are roundish and somewhat green. The very remarkable callosity at the base of the lip is bright yellow.

Wild in Sikkim in hot valleys at 2000 feet—J. D. Hooker; in Khasia, at 4000 feet—Hooker and Thomson.

27. CALANTHE DISCOLOR Lindl. in Sert. Orchid. sub t. 9. B. Reg. 1840. t. 55. L. F. p. 9:
Sepals and petals claret-coloured; lip white tinged with pink.
Wild in Japan—Zollinger.

Calanthe discolor Lindl. Bot. Reg. XXIV. 1838. Misc. 82:

Racemo laxo pubescente, sepalis petalisque acutis, labelli trilobi columnae omnino accreti pubescentis bilamellati lobo intermedio bilobo 3-carinato, calcare pubescente acuto limbo breviore. Sert. Orchid. sub t. 9.

Introduced from Belgium.

They no doubt belong either to Java or Japan. 1' in height. In this the lip is of a delicate white, whit a few spots of pink near the base. Sep. and pet. are of a deep reddish brown, a little disposed to be striped.

Bot. Reg. XXVI. 1840. 55:

Folia oblonga, venis tribus majoribus, caeteris minoribus interjectis, scapo elongato racemoso multifloro breviore. Scapus palmaris ad sesquipedalem florib. 8—20. Sepala et petala vinoso purpurea; labellum album, subroseum. — Comm. Aug. Mechelinck of Ghent.

28. CALANTHE STRIATA R. Br. in B. Reg. 578. L. F. p. 9:
Limodorum striatum Banks Ic. Kaempf t. 2.
C. bicolor Lindl. in Sert. Orch. sub t. 9.

Flowers yellow, cinnamon-brown at the back. The lip has a bifid linear downy callosity at the base, beyond which rise three lamellae extending almost to the point each having a minute lamellula at its own base.

Wild in Japan—Kaempfer.

Calanthe bicolor Lindl. l. c.:

Racemo laxo pubescente, sepalis petalisque acutis, labelli trilobi columnae omnino accreti lobis subaequalibus, intermedio cuneato apiculato trilamellato basi convexo pubescente bicorni, calcare acuto limbo duplo breviore glabro.

Flowers larger, than in discolor, bright yellow inside, and rich orangered externally; when spread open they are nearly 2" diam. Mr. Aug. Mechelinck sent it under the name of *Amblyglottis flava* Blume.

29. CALANTHE GRIFFITHII Lindl. in Paxt. Fl. Gard. sub t. 61. L. F. p. 9:

C. racemo laxo multiflore, labelli lobis lateralibus linearibus obtusis intermedio subrotundo truncato denticulato sub apice dente unico magno aucto, calcare recto pendulo.

A plant with the habit of C. puberula. Spur straight, about as long as the lip. A single compressed tooth just within the apex of the lip.

Wild in Bootan; To Chuka, on wet banks at 6000 feet, and above Telagong—Griffith.

L. c. in Paxt. Fl. G. praeterea: „ovario tomentoso," „calcare — — pubescente."

30. CALANTHE SPECIOSA Lindl. Orch. Nr. 8. (*Amblyglottis* Bl.) L. F. p. 9:
Flowers orange-coloured.
Wild in Java; in the dense woods in the mountainous parts of Bantam and Buitenzorg—Blume.

31. CALANTHE DENSIFLORA Lindl. Orch. Nr. 10. Bot. Reg. t. 1646. L. F. p. 9:
When young the raceme forms a globular mass, completely covered by roundish

ovate, thin deciduous bracts. Each scape is furnished with three inflated sheaths. The column is remarkable for being extended into a long constricted neck above its junction with the lip. Flowers apricot-yellow.

Wild in Sylhet — Wallich; Assam — Griffith; Khasia, at 4000 feet — Thomson and Hooker.

Lindl. l. c.:

Scapo foliis multo breviore, squamis laxis ventricosis, racemis densis multifloris corymbosis, labelli cum columna parum connati lobo medio cuneato bilobo, disco bilamellato, calcare longo recto pendulo apice clavato.

Rhizoma subterraneum, brevissimum, pullulationibus junioribus duris rigidis cornutis sanguineo pallido punctatis. Folia oblongo-lanceolata, plicata. Scapus semipedalis et ultra, squamis 2—3 ventricosis sanguineo-punctatis laxe vaginatis. Flores pallide lutei, in corymbum densum multiflorum congesti. Sepala et petala conniventia aequalia. Labellum cum columna parum connatum, trilobum; lobis lateralibus ascendentibus rotundatis, intermedio cuneato rotundato bilobo basi lamellis 2 cornutis brevibus ornato; calcar curvum pendulum, apice clavatum.

32. CALANTHE PLANTAGINEA L. O. N. 7. L. F. 9. Sert. Orch. t. 24. Griff. ic. t. 339.

Flowers pale rose-colour or violet with a darker lip.

Wild in Nepal and Kamaon—Wallich; Namik, at 9000 feet—Strachey and Winterbottom; Bootan, between Tussulling and Chindrippa, 7—7500 feet—Griffith; Sikkim—Cathcart.

Sert. l. c.: Disc. by Wallich: common about roots of trees in various mount. places in the valley of Nipal and in the forest on the summit of Mount Chandaghery. Febr. Roots thick, white, clustered, smooth when old, originally covered with dense white hairs. Stem is a creeping rhizome with round knobs, whence the leaves are produced. Leaves ovale, acute, 6—8'', wavy; their stalk 6'' deeply channelled, angular gradually widening upwards. — Scape 1—1½' high, often tinged with purple. Racemes 6—8'' in length, pale purple flowers; pedicels ½'' covered with short down like all the ext. parts of the flow. Bracts linear lanceolate, 4''' long, downy, nearly white. Perianth spread open, pale violet. Sepal lanceolate, acute, 3—8''; petals linear. Lip naked, 3 parted, with cuneate obovate segments, of which those of the side are more obtuse, than the middle, which is apiculate. 3 tubercles at the base; some reflexed hairs inside, at the base prolonged into a slender spur, which is notched at the end, pendulous, as long or longer, than the pedicel.

33. CALANTHE HERBACEA Lindl. Fol. p. 10:

C. foliis latis subsessilibus, labelli basi tricostati 4-lobi lobo intermedio alte obcordato, calcare sigmoideo.

Sepals and petals lanceolate, green. Lip pure white. Spur doubly curved yellowish

Wild in Sikkim, in hot valleys at 1—4000 feet—J. D. Hooker.

Obs. Cl. Lindley haec vult l. c. p. 10.

Calanthe vestita Lindl. Orch. Nr. 5. Paxt. Fl. G. 147. c. ic. Bot. Mag. t. 4671.

Cytheris Griffithii Wight ic. t. 1751.

Preptanthe vestita Rchb. fil. in Bot. Ztg. 1853. 498.

Flowers pale cream-colour. Inflorescence extremely shaggy. In a variety there is a deep crimson blotch at the base of the lip. Mr. Reichenbach having examined this plant before the pollen-masses adhered to their gland, supposed it to be a distinct genus, which he called Preptanthe, and placed among Epidendreae.

Wild in Burma—Griffith, Wallich.

Cf. supra p. 460. — Adde: Paxt. Mag. XVI. 128.

34. CALANTHE CHLOROLEUCA Lindl. Fol. p. 10:

C. racemo raro secundo, labelli nudi 4-lobi laciniis aequalibus rotundatis.

Flowers rich yellowish green. Lip white, with a dull yellowish stain at the base. Wild in Sikkim, in hot valleys at 2000 feet—J. D. Hooker.

35. CALANTHE FULGENS Lindl. Fol. p. 10:

C. racemo capitato paucifloro, labelli 4-lobi nudi laciniis lateralibus dimidiatis intermedio bilobo lunato multo majore, calcare pedicello longiore.

A beautiful plant. Flowers nearly three inches across, deep warm crimson, with a deep purple lip, having at its base a pair of naked yellow streaks.

Wild in Sikkim, in hot valleys at 2—4000 feet—J. D. Hooker.

36? CALANTHE ODORA Griffith notul. III. 365. L. F. p. 10:

I have not seen any specimen which agrees with the account given of this plant, which may perhaps not be a Calanthe. Griffith says it has — 1. Scapes appearing before the leaves; 2. Flowers large, white and showy, with the smell of Hyacinths; 3. Leaves rather glaucous underneath; 4. A spur two-toothed at the end; and 5. Eight pollen-masses with as many pulverulent caudicles! The only species of Calanthe that may correspond with the first char. is C. vaginata, Nr. 23; but it is uncertain whether the only specimen of that species at present known, may not be accidentally rather than naturally unaccompanied by leaves, and it differs in all other particulars. Griffith describes the flowering stem of this plant as being a foot and half high.

Wild in Upper Assam, in grassy places; Suddyah, April 10—Griffith.

Cf. etiam Paxt. Fl. G. III. p. 37:

I am acquainted with one other species, but too imperfectly to define it. Viz.:

Amblyglottis pilosa of Prof. de Vriese's Sumatra collection, with white flowers, narrow hairy sepals, naked petals, and a nearly equally four-lobed lip, with a curved sharp spur not half its own length.

1502. LIMATODIS *Bl.*

Bijdr. 375. Tab. 62. Lindl. Fol. VII. (Nov. 1855).

Differs from Calanthe in having the column not merely free but rolled up in the lip. The inflorescence is always lateral not terminal, and the flowers, when dried, acquire a peculiarly thin texture.

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1. LIMATODIS PAUCIFLORA Bl. l. c. L. O. Nr. 1. Paxt. Fl. G. sub t. 81. L. F. p. 1:

L. pedunculo bifloro foliis oblongis multo breviore, calcare brevi incurvo.

„Flowers white.“ Stem long, leafy at the end only.

Wild in Java; in the thick woods of Mount Salak—Blume.

2. LIMATODIS ROSEA Lindl. in Paxton's Fl. Gard. t. 81. L. F. p. 1:

L. racemo tomentoso multifloro foliis longiore, calcare brevi incurvo.

Flowers bright rose-colour.

Wild in Moulmein—T. Lobb.

Paxt. Fl. G. l. c.:

Pseudobulbis fusiformibus, foliis oblongo-lanceolatis plicatis glabris, scapo multifloro foliis longiore, floribus laxis, villosis, bracteis membranaceis recurvis ovario brevioribus, labello oblongo plano retuso, calcare recto obtuso horizontali, columna nana tomentosa.

Limatodis appears to have a column much elongated while that of Calanthe is in general particularly short, but such a difference is unimportant because C. densiflora has also a very long column, and the discovery of the present species with a very short column still further destroys any value which the character alluded to may had been supposed to possess. — Neár Moulmein prov. Martaban, Lobb.

Psb. long. Stem, flowers with long hairs. Lip destitute at the base of certain callosities represented by Blume.

Labellum omnino laeve, ungue circa columnam nanam convoluto, eique denique per spatium minimum adnato; haud vestigium callositatis aut appendicis cujuscunque. Anthera apice biloba, valde gibbosa, 8 locularis. Poll. 8, sessilia pulverea colligata. Rostellum bilobum, lobis rotundis, prominentibus. Glandula minuta, a rostello vix separabilis.

Mr. Veitch informs us, that this species flowers most abundantly, and that the pseudobulbs invariably have the peculiarity of producing a kind of neck about their middle. In the imported bulbs the part above the neck had all fallen off.

3. LIMATODIS GRACILIS Lindl. Fol. p. 1:

L. racemis multifloris pubescentibus foliis brevioribus, calcare nullo.

Calanthe gracilis L. O. Nr. 17. — B. M. t. 4714. — Griffith Not. 3. 367.

Flowers pale yellow, or according to a drawing of Cathcart's nearly white. Varies much in size.

Wild in Sylhet—Wallich; China, Hong-Kong—Champion; Khasia, at 3—4000 feet—Hooker and Thomson; Sikkim—Cathcart.

Hook. Lond. Journ. l. c. p. 36: On Victoria Peak, with Cypripedium, in December. The plant, not unlike Calanthe in general appearance, has a terrestrial stem, swollen at the base, and producing a new shoot next to it annually, from one to two feet high, having six or seven, distichous, broad, plaited, satiny, bright green leaves, and upright racemes from one terete scape, shooting from the stem a little above its base. The flowers, from ten to eighteen in the racemes are very odorous at night, with a delicious perfume like Mignionette. Pedicels nearly an inch long, arranged spirally round the scape, somewhat twisted. Sepals yellow, all equal, linear-oblong or obovate, the three exterior forming an equilateral triangle. Spur none. Column short, semicylindrical terminating abruptly. Anther coup opercular; pollenmasses 8, fastened by pairs to the roundish caudicle. Labellum three times as long as the column, at first convex, with a lobe at each side, then produced flatly, lobed and crisped, white with yellow spots. — Champion. — Lem. Jard. Fl. 104. (sub Cal. gr.) — Rchb. fil. Bonpl. III. 250: Hongkong Seemann.

4. LIMATODIS PUNCTATA Lindl. Fol. l. c.:

L. racemis subsessilibus paucifloris brevissimis, calcare recto infundibulari, labello undulato acuto.

A broad-leaved plant, with the vaginae copiously dotted with dull purple. Peduncles numerous, horizontal, two to four-flowered. Flowers white, with a yellowish lip.

Wild in Sumatra.

Species exclusa: *Limatodis mishmensis* Lindl. = *Phajus mishmensis* Rchb. fil. cf. Suppl.

1506. THELASIS *Bl.*

Bjdr. 385. Tab. 75.

Wight l. c. 1782: *Euproboscis* Griff.:

Gen. Char. Perianth posticous, connivent, fleshy. Sepals linear, oblong, lateral ones keeled. Petals narrow, lanceolate, (reflexed at the

apex). Lip simple entire, semi-convolute, continuous with the oblique base of the column. Column vertical, attenuated in front into a long twolegged rostellum (antice in rostellum bicrure longum attenuatum), stigma vertical. Anther dorsal, beaked. Pollinia 8, waxy, globose, with a long caudicula and linear gland.

Epiphytical caespitose plants, pseudobulbs turbinate, the new ones 3—4 leaved, leaves fleshy, oblong, emarginate, scape subclavate, erect; flowers spiked, one, bracteate, minute, greenish. Griffith Cal Journ. Nat. Hist. V. 371. 72.

I have thought it advisable to give Griffith's character in full, as I find it does not correspond with my dissections, though in other respects the plant seems identical. The following are the notes made while examining this plant. Perianth connivent, six parted in 2 rows, exterior series, sepals, larger, the anterior pair carinately winged on the back; interior series, petals, somewhat smaller, sublanceolate, anterior one, lip, 3 nerved. Stamens 3, sessile, opposite the sepals, each containing 8 globose waxy pollinia attached to a long slender caudicula furnished with a linear gland. Column very short (even with the base of the petals and stamen) with a forked rostellum as long as the anthers and to the apex of which, in course of time the glands of the caudicula become attached. Ovary 1 celled, placentiferous margins revolute, free within the cell. Comparing this with the dissections, two discrepancies will be remarked. The stamen at Nr. 7 is represented as double each half with a caudicula and 4 pollinia, and secondly the detached pollen has only 4 masses to the caudicula. In both respects the drawing is wrong as will be at once observed on comparing fig. 7. with the anthers of fig 6. which are correctly shown 1 celled, but dilated and ventricose below to enclose the large pollinia. In other respects the drawing is correct.

According to Mr. Griffith's character there is only one perfect stamen „anther parallel with the column, dorsal, fleshy, prolonged into a long beak." In place of one I find 3 such anthers. Can it be that as compared with mine, his plants were to that extent deficient, or were the anterior anthers overlooked in a hurried dissection? In either case it is extraodinary, first, as it seems improbable that two plants to all appearance so perfectly identical, should differ so widely in so essential an organ; and secondly it seems about equally improbable that such an accurate observer as Griffith should commit such an oversight. But considering the former the more improbable of the two, I may remark that this seems one of the most curious of Orchideous plants. It has 3 perfect stamens furnished with concave pollen and these attached to a caudicle and gland like these of Vandeae. Lindley rejects Apostasieae as a genus of Orchideae; this seems an equally anomalous plant; can it also be similarly rejected so as in that way to preserve the symmetry of the order. For myself I think not.

1. THELASIS PYGMAEA Lindl. 2. Contrib. Orchid. Ind. p. 63. *Euproboscis pygmaea* Griff. Wight l. c. 1732. The specimens from which the plant was first described were from Nepaul and flowered in the Botanical Garden at Calcutta. Those which my drawing was taken of were gathered by Mr. Jerdon on the Malabar ghauts.

***Obs.* Cl. Lindley l. c. monet, nomen „Euproboscidis Griffithii" non exstare in Calc. Journ. Equidem Lugduni Batavorum apud beat. Blume iconem ex Calc. J. l. c. desumptam mihi delineavi, cui inscripserat Bl. „ Euproboscis Griffithii." Hinc lapsus oriundus.**

2. THELASIS TRIPTERA Rchb. fil. in Bonpl. III. 219:

Foliis geminis, racemo spicato, ovariis trialatis.

Folia in pseudobulbis gemina, inaequaliter oblongocuneata, apice inaequali biloba cum denticulo interjecto.

Pedunculus gracilis bivaginatus vaginis ochreatis acutis distantibus. Racemus densiflorus oblongus. Bracteae triangulae acutae demum refractae, primum squar-

rosae. Flores demum nutantes. Sepala triangula. Tepala subaequalia minora hyalina. Labellum triangulum lateribus auriculiformibus obtusis erectis.

Cuming coll. phil. 2062.

150⁶/₁. JOSEPHIA *Wight.*

Ic. V. 1851. ante N. 1742.

Perianth globose, closed. Sepals equal, ovate, suborbicular, lateral ones incumbent on the lip. Petals obovate, oblong, obtuse, a little shorter, than the sepals. Lip connate with the base of column, fleshy, ventricose at the base, ecalcarate, constricted in the middle; limb entire, suborbicular, emarginate. Column erect, clavate, half round. Anther imperfectly 2 celled. Pollinia 4, parallel, oblong, clavate, sessile on the dilated shieldlike gland.

Epiphyte plants: leaves coriaceous long petioled, scapes erect, panicled many, flowered, flowers congested towards the ends of the branches, pedicelled and furnished with a minute acute, ovate, persistent bract. The flowers in this curious genus are annually renewed on the old scapes. — This fact I learn from Mr. Jerdon, who had it in cultivation for 3 years. — Seems near Agrostophyllum.

1. JOSEPHIA LANCEOLATA Wight l. c. 1742:

Leaves elliptic lanceolate acute at both ends; scapes a little longer than the leaves, naked, panicled, branches of the panicle racemose, all the sepals suborbicular; lip emarginate.

Flowers whitish, tinged with purple, lip reddish lilac. Branches of trees below Neda wuttim, Neilgherries, flowered Aug. and Sept.

2. JOSEPHIA LATIFOLIA Wight l. c. 1743:

Leaves coriaceous, broad ovate very obtuse or round above, tapering below into the longish sulcated petiol; scape panicled, about twice the length of the leaves, scaly, branches of the panicle short; flowers congested, subcapitate.

Pulney Mountains Aug. Sept.

150⁶/₂. CENTROPETALUM *Lindl.*

Sert. Orch. sub Tab. 21.

Sepala et petala libera, labello duplo minora. Labellum obovatum, indivisum, nudum, basi appendice parva excavata auctum. Columna petaloidea, convoluta, basi imo labello adnata. Anthera membranacea, unilocularis. Pollinia 4, distincta geminatim caudiculis 2 longis ascendentibus affixa.

1. CENTROPETALUM DISTICHUM Lindl. l. c.:

Folia disticha, carnosa, linearia, falcata. Pedunculi solitarii, terminales. Flores lutei, ½" lati. Columna denticulata. Labellum integerrimum.

Peruvia prov. Chachapoyas, inter lichenes. Matthews. — Pl. Hartweg. p. 550: forma alpestris, foliis floribusque minoribus. In montibus Loxae.

2. CENTROPETALUM WARSZEWICZII Rchb. fil. in v. Mohl und v. Schl. B. Z. 1852. 706:

Caulibus erectis dense et distiche foliosis, foliis linearibus acutis carnosis falcatis, apicem versus microscopice denticulatis, floribus in axillis foliorum ex spathis lanceis geminis parvulis hyalinis suffultis

solitariis (semper?), longe pedunculatis, ovario triptero, p. phyllis externis lanceolatis acutis, lateralibus ima basi cum labelli linea media connatis, lateralibus internis oblongis apiculatis, labello infra medium gynostemio adnato, rhombeo, apice emarginato, hinc inde antice lobulato, appendicula baseos lancea minuta, androclinii limbo petaloideo, convoluto usque ad labelli basin descendente, lobulato, subtiliter denticulato.

Blüthen so gross, wie die einer grossblüthigen *Jonopsis tenera* Lindl. „purpurn wie bei dunkelen Achimenes" (noch jetzt sichtbar). Davon sticht ab der weisse (gelbe?) Saum des androclinium. — Tracht des Angraecum pectinatum. — Herr von Warscewz. versicherte, dieses wohlriechende C. wäre eine Hauptzierde der Alpen Loxas. — Rchb. fil. Xen. I. Tab. 38. I. 1—5.

$150^6/_8$. NASONIA *Lindl.*

in Bentham Pl. Hartw., 50. (Dec. 1844.):

Sepala patentia, lateralia connata. Petala conformia, aequalia. Labellum liberum, cum pede paulo producto columnae articulatum, medio constrictum et appendiculatum. Columna erecta, basi teres; clinandrio longissimo erecto margine petaloideo cincto. Anthera unilocularis, apice longissima, cum columna parallela ideoque decurva. Pollinia 2, solida, sphaerica, caudiculae longissimae diaphanae subulatae apice affixa; glandula ovata. Rostellum breve bifidum.

Rchb. Xenia I. p. 97. Genus affine Centropetalo caudiculis ima basi connatis, polliniis in quovis crure solitariis.

Clavis generis ex Rchb. fil. l. c. p. 98.

Androclinium alatum.
  Sepala lateralia semiconnata . . . . *N. punctata* Lindl.
  Sepala lateralia libera. . . . .
    Labellum cordiforme . . . . *N. ionanthera* Rchb. fil. Wrzw.
    Labellum lanceum acutum.
      basi bifalculatum, foliis ovatis . . . . . *N. Myrtillus* Rchb. fil.
      medio carinulis geminis semiovatis, foliis lanceolatis . . . . *N. Hartwegii* Rchb. fil.
Androclinium apterum . . . . *N. sanguinea* Lindl.

A. Androclinium alatum.

aa. Disepala: sepala lateralia a basi medium usque coalita.

1. NASONIA PUNCTATA Lindl. l. c. Rchb. fil. l. c.:

Labelli panduriformis obtusi disco lamellato, lamella obtuse emarginata, retrorsa.

Planta humilis, tri-quadripollicaris. Folia lanceolata acute falcata (complicata?); vaginarum limbus minutissime microspice denticulatus. Flores axillares (purpurei?). Sepalum dorsale ovale obtusiusculum. Sepala lateralia apicibus ligulatis obtuse acutis libera: omnia supra nervum medium carinata, nervo lateralium sepalorum basi connato. Tepala ovalia obtuse acuta majora. Labellum supra descriptum ungue basilari gynostemii cum basi connatum. Gynostemii cucullus obtuse trilobus, lobis minute denticulatis. — In montibus El Sisme Hartweg 841! nec 1416!

Lindl l. c.: Herba 3—4 pollicaris, ebulbis, epiphyta, foliis distichis carnosis canaliculatis recurvis. Flores terminales, fasciculati, foliis cincti, verosimiliter rosei, vio-

laneo punctati. Ovarium trialatum. Sepala carinata; lateralia apice libera. Petala oblongo-lanceolata. Labellum basi cuneatum, medio constrictum apice rotundatum; appendice concava emarginata retrorsa. Nomen a naso, ob antherae formam, quae columnae quasi nasus.

In montibus El Sisme.

bb. Trisepalae.

2. NASONIA IONANTHERA Rchb. fil. Warscewcz. in Seemann Bonpl. II. 99. Rchb. fil. Xen. I. c. 797.:

Labello cordiformi, nervis baseos carinulatis callo bilobulo anteposito.

Rchb. fil. l. c. 98:

Androclinio alato, sepalis liberis, labelli cordiformis nervis baseos carinulatis anteposito callo bilobulo.

Ascendens. Basi ex vaginis vetustis rudibus radicans. Folia carnosissima, incurva, ancipitia, basi per medium carinata, superne inter utrumque limbum carinatum canaliculata. Racemi uniflori. Bracteae triangulae membranaceae carinatae pedicellis breviores. Pedicelli sensim trigoni. in ovaria triptera transeuntes. Flores illos Nasoniae punctatae superantes. Mentulum parvum, sed bene conspicuum. Sepala triangula, dorsi linea media carinata. Tepala oblonga acuta. Labellum ima basi cum angulis descendentibus gynostemii connatum; lamina libera triangula, lateribus posticis rotundatis cordiformis; nervi baseos medii incrassato carinulati; antepositus callus anceps triangulus apice bilobulus parvulus. Androclinii cucullus cum alis lateralibus subintegerrimus. Anthera alato triangula. Caudicula profunde bipartita ima basi supra glandulam cordiformem connata. Flores cinnabarini: anthera intensissime nigroviolacea. Peruvia. Rchb. fil. Xen. Tab. 38. II. 6—14.

3. NASONIA MYRTILLUS Rchb. fil. in Seemann Bonpl. 1855. Rchb. fil. l. c. 197.:

Labello lanceo acuto ante basin bifalculato.

Pasto, woods. Jamieson. Rchb. fil. l. c. 99:

Caulis ascendens tri- — quadripollicaris. Vaginae atratae. Folia ovata apiculata cum vaginis margine cartilagineo denticulato marginato; superne impressae favosa (ex siccando ?). Pedunculi bibracteati. Bracteae triangulae acutae parvae. Pedicellus cum ovario violaceus tripterus. Sepala lineari triangula dorso carinata; lateralia labello supposita. Tepala oblongolanceolata obtuse acuta. Labellum lanceoligulatam acutam basi cum gynostemio connatum: lamellae geminae acutae parvae in medio. Androclinii cucullus bene lobatus et gynostemium utrinque descendenti alatum. Anthera apice retusa. Caudiculae supra basin connatae, rectae. Glandula pandurata utrinque acuta. Flos purpureus (siccus). Rchb. fil. Xen. Tab. 38. III. 15—20.

4. NASONIA HARTWEGII Rchb. fil. l. c. 97:

Labello ligulato sigmoideo acuto medio carinulis elevatulis semiovatis humillimis.

Nasonia punctata Lindl. in scheda 1416 l (autographa).

Planta validior, arcuata, ascendens, usque sexpollicaris ex vaginis antiquis nunc caules novos prodens. Vaginae bene nervosae margine minute denticulatae. Laminae lanceolatae acutae (perpendiculares, planae in sicca) superficie superiori carinulato favosae (an ex siccatione?). Racemi axillares uni- — biflori. Bracteae triangulae carinatae (siccae cinnabarinae). Pedicelli longe exserti, in ovaria triptera in sepalorum confiniis abrupte abeuntes. Sepala triangula acuminata supra nerves medios carinata. Tepala oblongo lanceolata apiculata. Labellum ima basi minute saccato excavatum dein cum undulatione utrinque inflexum, tandem longe lanceolatum. Gynostemii ala triloba, lobis lateralibus abruptis. Anthera de vertice descendens usque ad

rostellum medianum. Cucullus sub fovea connatus supra basin cum labelli sacculo confluens. Capsula sphaerica triptera. Hartweg 1416!

B. Androclinium apterum.

5. NASONIA SANGUINEA Lindl. Orch. Lind. 13. Nr. 93. Rchb. fl. 98.

Caulis erectus. Folia recta carnosa. Flores quam in Nasonia punctata minores. Labellum acutum. Androclinium integerrimum. Flores intense flavi.

On the slope of Tolima 6000'. February 1843. Linden 1274. (Nobis nec visa nec intellecta cum androclinium apterum forsan directionem antherae valde mutare debeat.)

Lindl. in Orch. Linden p. 13:

Foliis rectis, labello acuto, columna marginata, clinandrio integerrimo aptero.

This is a larger plant than N. punctata and is erect instead of ascending. The leaves are straight, not falcate; the flowers smaller and the lip acute not rounded and dilated.

Supplementa et emendanda quaedam.

Pag. 218. DENDROCHILUM (Sect. II. L. O.) UNCATUM Rchb. fil. Bonpl. III. 222:

Aff. Dendrochilo filiformi Lindl. (= Cuming 2103?), labelli trilobi lobis basilaribus antrorsis ovato triangulis margine externo denticulatis, lobo medio cuneato ovato antice emarginato apiculato, carinis duabus semilunatis extrorsis a basi in basin lobi medii, gynostemii dentibus lateralibus uncinatis.

Plantula subpedalis. Pseudobulbi non evoluti. Vaginae arctae ochraceae nigro maculatae. Folium cuneato ligulatum acutum quinquenerve quadripollicare, duas pollicis tertias latum. Pedunculus filiformis apicem versus prope anceps; racemosus per tres quatuorve pollices. Bracteae scariosae semiovatae obtusae acutae ante basin subventricosae ovaria aequantes. Sepala triangula acuta, lateralia sublongiora. Tepala cuneato oblonga acuta, paulo latiora, nunc hinc minutissime denticulata. Gynostemium gracile. Androclinii lobus dorsalis acutus; dentes laterales in medio gynostemio exserti, porrecti. — Bracteae fatuae quaedam vulgo in basi inflorescentiae more Coelogynarum congestae. 2108 lubenter haberem pro *D. filiformi* Lindl., nisi ill. auctor. dixerit flores minutissimos. Nunc sub 2108 tamen D. uncatum reperi in herb. Lenorm. 2073 Cuming. Phil.

pag. 218. DENDROCHILUM? (Sect. I. L. O.) PUMILUM Rchb. fil. Bonpl. III. 222:

Gynostemio abbreviato apice trilobo, labello semiovato apice tridentato, dentibus antrorsis subaequalibus corniculis geminis in basi dentis medii marginati.

Pseudobulbus semifusiformis subpollicaris. Folium a basi lineari lanceolatum acutum trinerve tres pollices longum, tertiam pollicis latum. Vaginae stipantes nervosae maculatae. Pedunculus axillaris plurivaginatus. Vaginae haud ita arctae apice libero acutae. Pars racemosa pedunculi subflexuosa. Bracteae semioblongae acutae ovaria subaequantes. Sepala lanceolata. Tepala cuneato ovata duplo latiora. Labellum et gynostemium triplo breviora. Anthera oblonga utrinque retuse depressa. Pollinia?? Perigonium album? illi Dendrochili cornuti triplo majus. 2102 Cuming Phil.

pag. 225: **COELOGYNE THUNIANA** Rchb. fil. Xenia I. p. 127. Tab. 46.

pag. 285: post N. 33 **DENDROBIUM MUCRONULATUM** Hort. Donat. 156:

Caulibus teretibus gracilibus pendulis (vix pedalibus) basi attenuatis, foliis linearilanceolatis, petalis sepalis subaequalibus, sepalis mucronulatis, labello crenato unguiculato glaberrimo petalis parce breviore.

L'ovaire lilas foncé est trois fois aussi long, que la fleur; les sépales et pétales sont lilas foncé ou plutôt d'un violet vif; le labellum est rose avec une tache d'un jaune orange à la base. Cette espèce appartient à ce petit groupe des Eudendrobium transp., dont le Dendrobium cretaceum fait partie, qui par avortement ne produisent ordinairement qu'une fleur au lieux de deux à l'aiselle de chaque feuille. Quoique les fleurs soient assez grandes, et bien colorées, la plante ne produit cependant aucun effet parceque les fleurs sont trop eloignées les unes des autres et n'offrent rien de gracieux en raison de la longeur exagérée de l'ovaire, qui forme une ligne presque horizontale avec la tige sans feuilles.

pag. 250. Nr. 25: **BOLBOPHYLLUM ANTENNIFERUM** Rchb. fil. mutandum in **BOLBOPH. GEBAENSE.** Jamjam enim adest B. antenniferum Rchb. fil. pag. 238. uti egregie monet optimus Van Houtte Gandanensis.

pag. 456. legatur in Paxtoniae roseae lima ultima: „phantasticentissimum."

pag. 460 addatur sub N. 11: **PHAJUS MISHMENSIS** Rchb. fil. in Bonpl. V. 43: *Limatodes mishmensis* Lindl. in Paxt. Fl. G. III. 36:

Floribus glabris, calcari incurvo, labello obovato nudo obtuso apice 4-lobo. — Mishmee Hills. Griff.

Lindl. Fol. I.: racemo longe pedunculato caule folioso breviore, floribus glabris, labello obovato obtuso 4-lobo per axin ramentaceo, calcare incurvo.

pag. 488. **ORNITHIDIUM INFLEXUM** Rchb. fil. Huc: *Camaridium inflexum* Lindl. Ann. N. H. IV. 115:

Caule elongato subramoso pseudobulbifero, foliis geminis inaequalibus, coriaceis oblongis basi canaliculatis, floribus solitariis, sepalis petalisque ovatis acutis, labello concavo erecto trilobo; laciniis membranaceis lateralibus inflexis falcatis serrulatis intermedia subrotunda leviter emarginata basi tuberculata. — Leaves about 2" long.

pag. 501. **SARCOCHILUS AUSTRALIS** Rchb. fil. Hook. Tasm. tab. CXXVIII. sub „Gunnia australi."

pag. 511. **MAXILLARIA AURANTIACA** Rich. Gal. Ann. sc. nat. 1845. p. 25:

Pseudobulbis ovoideo-tetragonis 1-phyllis; folio elliptico acuto; scapo radicali 4—5-floro nudiusculo; floribus aurantiacis clausis, labello unguiculato ovali, lanceolato, acuto, denticulato, obsolete trilobo. — Mexico.

pag. 512. **MAXILLARIA ACUMINATA**: prior diagnosis est Lindleyi l. c., secunda mea ex v. Schl. B. Z.

pag. 552. **KOELLENSTEINIA GRAMINEA** Rchb. fil. Bonpl. IV. 323. adde *Promenaea graminea* Lindl. B. Reg. XXIX. (1843.) pag. 13. Guayana; Brazil in the province of Bahia.

pag. 563. Omisimus monographiam *Zygostatis* Lindl. Fol. I:

Sepala membranacea, subaequalia, libera, reflexa. Petala membranacea, unguiculata, patentia, majora. Labellum pariter membranaceum, cymbiforme, basi appendice libera incurva auctum. Columna libera, elongata, arcuata, teres; rostello longissimo, recurvo. Stigma area triangularis ad basin rostelli Adest praeterea ad basin columnae utrinque brachium subcarnosum, liberum, horizontale, apice dilatatum, columnae ipsius longitudine. Pollinia 2, pyriformia; caudicula e basi cuneata in setam geniculatam producta; glandula angusta, ovali. Anthera membranacea, acuminata, rostellum ipsum recurvum haud tegens. Herbae epiphytae, acaules, Brasilienses, ebulbes. Folia pauca, angusta, carnosa. Racemi penduli, floribus parvis herbaceis.

The relation of this, in a very near degree, with Ornithocephalus, of which it has much the appearance, is unquestionable. The distinction mainly resides in the presence here of a linear horizontal arm on each side of the column at its base, and of a fleshy incurved process at the base of the lip standing between the arms. What is the signification of these arms, and of the intermediate process? When the genus was published in the „Botanical Register" I compared the arms to the column ears of Burlingtonia; upon which supposition the customary sterile stamens of Orchidaceae must be assumed to be occasionally free. It is, however, not improbable that the apparatus in question may consist of three abortive stamens belonging to two different whorls. Dr. R. Brown long since (Wallich Pl. As. rar. I. 7) pointed out the possibility that the processes of the lip found in Pterostylis, and certain other genera, might represent staminal apparatus, completing the customary number of male parts found in Endogens. He even remarked that „perhaps it may be considered as indicated in all cases, where the labellum is furnished with a process, however minute, arising from its axis." I have not seen reason to express publicly an acquiescence in that hypothesis, not having succeeded in finding satisfactory evidence of its truth; on the contrary, it has appeared to me that the processes in question might as justly be referred to the stigma: I am, however, bound to admit, that upon the whole there is an accumulation of facts so much in favour of the theory of the sagacious observer above mentioned, that it becomes more and more probable It is especially to be noted, that the number of processes found on the lip is usually one, two or three; the latter being the more common. In some instances, one may represent the front abortive stamen only, two may represent the two laterals only, and three may represent them all. It is also remarkable, that where three processes or three rows of processes are present, the two lateral are generally the largest, as if they represented a more vigorous series of development than that in the centre. To which it may be added, that where more, than three rows of processes are present, nevertheless, the number three seems fundamental. The scientific reader will readily understand this by reference to the accompanying diagram, in which the supposed inner series of stamina is represented by three black dots (•), and the outer series by as many open dots (◦).

Upon this hypothesis the two outer abortive stamens of Zygostates are represented by the free horizontal arms, and of the three inner the two lateral are altogether undeveloped, while the anterior appears in the form of the fleshy process at the base of the lip.

1. ZYGOSTATES CORNUTA Lindl. l. c.:

Z. petalis rhomboideis medio tantum serratis, labelli appendice integra, brachiis apice bilobis.

Spike about four inches long, with short acute bracts. Leaves narrowly lanceolate, not so long. Sepals ovate, obtuse, the dorsal revolute at the margin. Petals wedge-shaped and entire at the base, as well as the apex. Lip serrated like the petals, crimson, acute. Horizontal arms dilated and 2-lobed at the end.

Wild in Brazil—Prince Maximilian of Wied Neuwied.

2. ZYGOSTATES LUNATA Lindl. l. c.:

Z. petalis lunatis inciso-serratis basi cunealis integris, labelli appendice apice 3-loba, lobis lateralibus divergentibus, brachiis apice globosis.

Very like the last, but the flowers are larger and further apart. The petals are not entire at the point, but regularly fringed all round, except at the cuneate base; the appendix of the lip terminates in two diverging lobes, and the horizontal arms are globular at the end, the column is also more slender. Sepals whitish. Petals greenish-yellow, according to Descourtilz.

Wild in Brazil; on trees near the town of Mariana, in the province of Minas-Gerães—Martius; on trees on the highest wooded mountains of the district of Bananal,

in the midst of dense cold fogs, which are almost perpetual, flowering in March. Descourtilz's drawings Nr. 4.

pag. 648. DIPODIUM PUNCTATUM R. Br. Prodr. 331 : Hook. f. Fl. Tasm. T. CXXVI.

pag. 664. WARREA TRICOLOR Lindl. Var. unijugata. (*W. unijugata* H. Petrop.) Regel Ind. H. Petrop. 1855. Labello cucullato, circuitu suborbiculari, antice emarginato-bilobo, intus medio subtrijugato, jugo medio elevato, jugis lateralibus vix elevatis vix conspicuis. Forma genuina differt labello jugis tribus elevatis carnosis et (v. Rchb. fil. Xenia Orchidacea p. 63. t. 24.) labello circuitu rhombeo-ovato, antice trilobo, lobo medio producto sinuato-bilobulo. Planta nostra cum descriptione et figura Hookeri (Bot. Mag. t. 4235.) exceptione jugorum forma, congruit. Scapus 3—4-pedalis. Folia plicata, anguste lanceolata, bipedalia. Flores speciosi albi, labello purpureo, venis obscurioribus percurso.

pag. 665. WARREA CYANEA Lindl. Rchb. fil. Bonpl. II. 281. Ocanna. 6000. Juli Schlim. 29. — l. c. III. 67. Ocanna. März 5000'. Auf der Erde. Wagener.

pag. 666. ZYGOSEPALUM ROSTRATUM Rchb. fil. cf. Bot. Reg. XXX. 1844. Misc. 150. Hook. Lond. Journ. II. 1843. 673: On trees. British Guyana. Schomburgk 502.

pag 742. ONCIDIUM SARCODES Lindl. I. Hort. S. IV. 260:

O. panicula racemosa angusta, sepalis liberis obovatis planiusculis, petalis majoribus unguiculatis obovato-spathulatis repandis, labelli lobis lateralibus nanis serrulatis intermedio maximo undulato repando emarginato, crista lineari apice biloba tuberculosa pubescente, columnae pubescentis clinandrio anguste marginato alis carnosis truncatis glabris.

Brazil. Habit of O. pubes and amictum. Flowers large, bright yellow with brown red; column white. — Downy column, serrate side lobes of lip and peculiar two-lobed hairy crest distinguish it from ampliatum and excavatum.

pag. 759. ONCIDIUM SPECTABILE Rchb. fil. c. Morelianum. V. Houtte Fl. Serres X. 1008.

pag. 766. post *Oncidium caudatum* Rchb. fil.: ONCIDIUM JOSSTIANUM. *Brassia Jossliana* Rchb. fil. in Regel Gartenfl. III p. 310. Tab. 100:

Bracteis squamatis abbreviatis, sepalis lanceis a medio longe ac angustissime lineari subulatis, tepalis lanceis acuminatis, labello subaequilongis, labello pandurato basi ac lateribus rotundato, sensim obcuneato constricto, in partem anticam triangularem latiorem dilatato, angulis in hac lateralibus obtusatis, margine crispo lobulato, hinc denticulato, callis baseos lineari-carinatis, interne aurantiaco velutinis, 2 dentibus triangulis antepositis, 2 subaequalibus utrinque juxta positis.

pag. 768. ONCIDIUM GIREOUDIANUM Rchb. fil.: Xen. I. tab. 32.

pag. 771. ONCIDIUM RACEMOSUM Rchb. fil. Lemaire Jard. Fl. 349. (sub Solenidio).

pag. 805. ONCIDIUM POLYCHROMUM Scheidw. Allg. Berl. Gartenztg. 1844. 218.

Pseudobulbis compressis, costatis, diphyllis, foliis lanceolatis, acuminatis, subtus nervosis, scapo erecto ramoso plurifloro; ramis divaricatis flexuosis, petalis et sepalis aequalibus, lato-lanceolatis undulatis, labello trilobo, lobo intermedio transverso, emarginato, ad basin quinque lamellis linearibus instructo; lobis lateralibus rotundatis, columnae alis acutissimis crenulatis. — Anthera subbilocularis, pollinia 2 subglobosa, caudicula plana, glandula ovalis.

Folia 15'' longa, 1'' lata; pseudobulbi 3 pollices longi, 2 pollices lati. Scapus bi— tripedalis. Flores magni speciosi, marcescentes: petala et sepala viridilutea maculis olivaceis notata; labellum album basi dilute-purpureum et striatum. Columnae summa pars circa stigma aurantiaca, alae antheraque purpureae.

Hab. in Brasilia.

Blumenabtheilungen grünlich gelb, olivenbraun gefleckt. Kronenlippe weiss, am Grunde hellpurpurn verwaschen, und zugleich dunkelpurpurn gestreift. Obrer Theil der Säule sowie die Umgegend der Narbe orangefarben; Flügel, sowie Anthere purpurfarben.

Blumenschaft ist beinahe 3' hoch mit ausgesperrten Aesten und zahlreichen 1'' Diam. habenden Blumen besetzt. Gewächshaus Laeken, blühte 2 Monate lang.

pag 817. ONCIDIUM OBOVATUM Presl. Reliq. Haenk. I. 99. Pseudobulbus 4-pollicaris. Folia ignota. Scapus terminalis, pedalis, erectus, vaginis membranaceis albidis vestitus, apice paniculatus. Panicula simplex, patula, 4 pollicaris. Bracteae linearilanceolatae acutae membranaceae, inferiores ½ poll. longae. Perianthium recto patens. Sepala linearilanceolata acuta aequalia 5 lineas longa. Labellum aequilongum obovatum integrum erectum, patens, basi supra cristatum. Columna apicem versus alata, apice tridentata, dente medio in rostrum rotundatum protongato. Mexico. — Known only from Presl, whose habitat is possibly wrong. If the scape is really terminal, this plant is perhaps not an Oncidium.

pag. 817. ONCIDIUM GLOBULIFERUM H. B. K. — L. O. 202: bulbo subgloboso foliis oblongis brevissime mucronatis, scapis simplicibus subunifloris, foliolis calycis subaequalibus crenulato undulatis, labello subreniformi apice emarginato bilobo, gynostemio apice ala crenulata, cincto. Popayan. — Flowers red, spotted. Lip very large, with small lateral lobes.

pag. 817. ONCIDIUM FORKELII Scheidweiler Gartenztg. 1842. p. 309. Lindl. B. R 1843. Misc. 14:

Pseudobulbis monophyllis; foliis coriaceis, oblongis, acutis, vaginis ciliatis; scapo erecto punctato, trifloro, foliis breviore; sepalis lateralibus liberis, oblongo-ovatis, acuminatis; superiore ovato-undulato; petalis oblongis margine undulatis; labello trilobo, lobis lateralibus minoribus, intermedio maximo rotundato baseos callis duobus instructo anteriore compresso bicorni, posterioris lamina plicata; gynostemio alato, alis lilacinis. Anthera carnosa, galeata, pollinia duo in glandula sessilia.

Folia 10—12'' longa, 3—4'' lata. Sepala extus fusco-maculata, petala apice virentia basi fuscata, labellum lilacinum. — A Mexican species, that has flowered in the coll. of His Majesty the King of Belgium, at Laeken. It has been named after Mr. Forkel, the chief gardener there. It is said to be one of the handsomest of the genus, with flowers 1'' in diam., greenish yellow, spotted with crimson; the petal clear violet, the lip large and round, with small side lobes.

pag. 817. ONCIDIUM GALEATUM Scheidw. Allg. Gartenztg. 1839. 40:

Sepalis lateralibus subfalcatis integerrimis, supremo galeato, unguiculato, petalis undulatis, obtusis, labelli lobis late rotundatis, crenulatis, intermedio trapeziformi, crista lobis tribus composita, lobis crenato undulatis; columna alis porrectis, obtuse repandis.

Pseudobulbi oblongi compressi; folia tria, oblonga, coriacea, nitida, acuta Scapus paniculatus multiflorus bipedalis et ultra. Brasilia.

Dreiständige, lanzettliche, lederartige, oben spitze glänzende Blätter. Aeussere seitliche Hüllblätter ganz, stumpf, gelb, mit je 2 runden braunen Flecken, obre Abtheilung helmförmig mit braunen Querstreifen, innere Hüllblätter wellenförmig mit mehreren Flecken. Lippe ist unverhältnissmässig gross, Seitenlappen abgerundet gekerbt, der mittlere trapezförmig gelblich, ohne Flecken; Flügel der Säuleausgestreckt geschweift. Schaft über 2' hoch, vielblüthig.

pag. 822. PACHYPHYLLUM PASTI Rchb. fil. Bonpl. III. 239:

Vaginis opacis obscure nervosis margine ciliatis, foliis ovatis apiculatis margine ciliato denticulatis, tepalis ligulatis retusis acutis margine denticulatis, labello ligulato medio utrinque obscure angulato, carinulis 2 falcatis in disco.

Caulis 8—9pollicaris. Vaginae siccae hinc purpureo aspersae. Folia semipollicaria, plura adhuc minora, longitudini semilata. Bracteae triangulae carinatae minutae. From the Volcano of Pasto at 1200 f. of elev.; on trees. Ecuador. 439. 1849 Jamieson.

pag. 833: restituatur ODONTOGLOSSUM ROSSII Lindl. pro specie. Nam *Odontoglossum apterum* Lex. recte differt. Si quidem est species nobis cognita, est Od. nebulosum ob pseudobulbos ovatos, columnam crassam, scapum teretem, flores albos centro purpureomaculatos. Ubi enim omnino centro maculati dicuntur, debent etiam in labelli basi maculae occurrere. Omnia sectionis Odontoglossa hic vere assidue iterum iterumque perlustravi, ubi novum Odontoglossum Warnerianum descripsi.

pag. 863. PHALAENOPSIS PALLENS Rchb. fil. Mss. Huc: *Trichoglottis pallens* Lindl. Journ H. Soc. V. 34. et Paxt. Fl. G. 15. Dwarf erect plant, with oblong distichous leaves and a lateral flower or two, not quite 2 inches in diameter, pale delicate green, with delicate brownish spots and a white lip. The latter organ was oblong, with a white, shaggy crest on the upper side and a pair of short yellowish scimeter-shaped segments standing erect near the base, within these were a pair forked callosities, one placed before the other in the centre, but no sac or pouch was found between there. *Stauropsis pallens* Reh b. fil Otto Hamb. Gts. 1860.

pag. 868. 13. b. VANDA WIGHTII:

Aff. V. Stangeanae Rchb. fil. foliis longissimis anguste ligulatis apice inaequali acute bilobis, pedunculo paucifloro, laxifloro, labelli auriculis subquadratis, lamina late ovata apice contracta ligulata, obtuse biloba, calcari conico, carinis geminis crassis per discum, basi carinarum ac basi auricularum pilosulis, columna pro genere gracili.

Die Blätter dieser Art sind ungemein stattlich und stehen sehr dicht gedrängt, die Länge eines Fusses überschreitend. — Die armblüthige Blüthentraube hat Blüthen, welche getrocknet so gross, wie die frischer *V. concolor* Bl. Getrocknet sehen sie lederbraun aus, die Lippe ist heller, gelblich. Nilgherries Wight!

pag. 874. ad calcem Acampis generis. Huc ducendae duae species haud bene notae:

SACCOLABIUM OCHRACEUM Lindl. Bot. Reg. XXVIII. (1842.) Misc. 4:

Foliis distichis coriaceis apice oblique bilobis, racemis subramosis, sepalis petalisque linearibus obtusis carnosis, (luteis rubro fasciatis), labelli lamina subsagittata recurva papillosa margine erosa, calcare obtuso.

Ceylon. Wilmot Horton.

App. of Cleisostoma maculosum. Flowers are small, of an ochre-yellow colour marked with transverse broken bands of dull red.

„SACCOLABIUM PAPILLOSUM Lindl.“ Wight l. c. V. 1672:

Leaves strapshaped, obliquely cuspidate at the apex, racemes short, capitate, sepals fleshy, linear, ovate, obtuse, spur of the lip obconical, obtuse, villous within, lamina ovate fleshy, papillose, recurved. Flowers white and tinged with yellow and purple. Malabar.

pag. 901. sub *Aerantho Schiedei:* TODAROA A. Rich. Gal. Ann. scienc. nat. l. c. pag. 28:

Flores resupinati. Perianthium tubuliforme. Sepala libera. Labellum superius calcaratum integrum subcordiforme: gynostemium teres. Pollinia 2 in lamina angusta lineari insidentia. T. micrantha Nob. tab. 38.

pag. 909. Huc adde ex pag. 278. Eriae planicaulis Wall. diagnosin. Species ibi delenda.

ad pag. 914: CALANTHE WIGHTII:

Aff. Cal. emarginatae Lindl. labelli laciniis posticis semiovatis acutis antrorsis, lacinia media cuneato dilatata flabellata, bilobo-emarginata, verruculis triseriatis in ima basi agmen efficientibus lacinias posticas brevissimas haud semiaequantibus, calcari inflato crasso acuto.

Calanthe Masuca Lindl. recedit labelli laciniis posticis multo longioribus, cuneum labelli aequantibus, calcari apice emarginato. *Calanthe emarginata* Lindl. recedit la-

belli laciniis posticis omnino semiovatis minimis, calcari multo tenuiori. — *C. emarginata* Wight III. 918. (perbona exceptis callis.) Courtallum Wight!

pag. 916: CALANTHE PARVIFLORA Lindl. Specimina Musei Lugdunensi Batavorum Amblyglottidis flavae omnino referunt hanc. Sed icon in Bl. Tabula LXIV. certe *C. veratrifoliae* RBr. longe similior.

pag. 917. Nr. 23. CALANTHE PERROTTETII A. Rich.: Huc, nec ad C. veratrifoliam revocanda est Cal. comosa Rchb. fil.

pag. 918. CALANTHI GRACILLIMAE Lindl. mero lapsu typographico anglico labellum 5 lobum pro 4 lobo tribuitur. — Addantur collectores: Lay et Collie.

Sed haec hactenus. Proxima serie, fato favente unus nostrum, seu amicissimus cl. Carolus Müller, seu ego, reliqua publici juris facturus est.

Rchb. fil.

Ordo GRAMINEAE *Juss.*

(Endl. gen. pl. p. 77. Kunth En. I. et app. — Walp. Ann III. p. 710.)
(E. G. Steudel Synopsis pl. Glumacearum, Stuttgartiae 1855.)

In graminum hac elaboratione, quam amicus meus cl. Andersonius Holmiensis maxima parte benigne curavit, non omnia, quae voluit multis aliis negotiis oppressus ad finem perduxit, sed spero, ut desiderata in cyclo sequente Annalium rite persolvantur.

Tribus I. *ORYZEAE.* Kth. Gram.

728. LEERSIA. Sol. *)

(Endl. gen. pl. n. 728. — Walp. Ann. III. 710.)

1. LEERSIA HEXANDRA (Swartz Fl. ind. occ. 130) — *L. australis* Br. Prodr. I. 210. Steud. Synops. p. 2. — *L. mexicana* Kth. Gram. I. t. 1. Steud. Synops. I. c. — *S. mauritanica* Salzm. Steud. Synops. I. c. — *L. brasiliensis* Spr. — *L. contracta* Nees. — *L. glaberrima* Trin. — *L. Triniana* Sieb. — L. abyssinica Hochst. — omnes synonyma sec. Cosson: Bullet. de la Soc. bot. 1854. p. 313.

In paludosis Algeriae occ. prope La Calle! imprimis in sylvaticis uliginosis et in palude Bou-Merchen ad lacum Houbera: Cosson l. c. In utriusque hemisphaerii regione intertropica, rarius extra occurrens: ad Tingidem (Salzmann), in Ægypto (Delile Sieber) Abyssinia (Schimper) ad promontorium Bonae Spei (Drége, Ecklon), in Bengalia (Griffith), Nepalia (Wallich), insula Taprobana (Walker), ins. Philippinis (Cuming), Florida (Chapman), New.-Orleans (Drummond), Texas, Rio Brazos (Drummond), Mexico (ex Kunth), Guyana gallica (Poiteau, Leprieur), Pernambuco (Gardner), Nova Hollandia (R. Br.)

2. LEERSIA AEGYPTIACA Figari et Not.
Mem. Acad. di Torino 1854. p. 317 tab. 1—8.

Haec species a L. oryzoide quam e plurib. Europae regionib. habemus et vivam saepe observavimus, quammaxime differt, et primum culmo vaginisque laevissimis, f. vix sub tactu scabridis nec marg. secantibus paleis firmis non papyraceis, staminibus 4—6. Diff. insuper statura minore, paniculae paucifiorae contractae ramis simplicib. et toto habitu. — Vide l. c. et descript. amplam.

In arvis humidis Deltae, mensib. Jan. et Febr.

L. oryzoides Del. Fl. Aeg.? Savi Cat. p. 16?

3. LEERSIA FEROX Figari et Notaris.
Mem dell' Acad. Torino 1854. p. 319 tab. II. 1—10.

Iisd. fere notis ac L. Aegyptiaca Fig. ab oryzoide differt haec species; nempe compagine palear. papyracearum firmiore. Haec insuper per belle ab oryzoide recedit, caryopside palearum cavitatem fere ex integro implente, quae in oryzoide paleis membranaceis multo minor. Ab Aegyptica distinguimus palea inferiore semi-elliptica, nervis ejusd.

*) A. Braun: Zurückführung der Gattung Leersia zur Gattung Oryza L., in Verhdl. des bot. Vereins für Brandenburg 1860 p. 195—205 tab. III A.

omnibus setoso-ciliatis, foliis scabridis, panicula longe exserta, locustis 3-andris. —

Vide l. c. descr. amplam.

In Nubia superiore ad amnem caeruleum.

736. EHRHARTA Thunb.

(Knth. en. I. p. 11. suppl.. p. 9—11).

1. **EHRHARTA COLENSOI.**
Hook. Fl. Nov. Zeland. p. 288 Tab. 65a.

Glaberrima. cespitosa, culmis ramosis curvis subdistiche foliosis, foliis confertis suberectis strictis lineari-subulatis, intus scaberulis, vaginis brevibus, ligula brevissima, panicula suberecta contracta, ramis paucis brevibus, spiculis striato-nervosis, glumis acuminatis inferiore 3—5-nervi superiore 5—nervi, flosculis inferioribus basi barbatis fl. neutr. palea 7-nervi aristata, fl. hermaphr. palea inferiore brevi truncata superiorem linearem duplo longiore, staminibus 2, antheris oblongis.
Hab. Northern Island Nov. Zeland. Colenso. Descriptio l. c.

738. MICROLÆNA.

(Knth. en. I. 1. p. 16 et I. 2. p. 12.)

1. **MICROLAENA GUNNII** Hook. fil. (Flora Tasm. 2 p. 105 f. 155 A), culmis elongatis foliosis vaginis foliisque scaberulis pilosisve, racemo elongato subsimplici, pedicellis breviusculis, glumis minimis acutis stipite florum aequilongis, aristis palearum inaequalibus, paleis scaberulis v. dorso ciliatis inferiore intermedio ⅓ breviore, floris hermaphroditi inferiore acuminato v. subaristato.

Habitat in Tasmania, Penquite prope Launceston, (Gunn). Cheshunt (Archer), Huon River (Oldfiels).

Culmi caespitosi, inferne ramosi, 2-3-pedales; foliorum lamina 2-pollicaris; racemus gracilis, nutans, 6—8 poll. longus; spiculae 1½ lin. longae, arista inferiore altera tertia parte breviore, palea profunde sulcata. *M. stipoidi* valde affinis sed major, magisque scabra et pilosa, pedicellis brevioribus. —

738. DIPLAX Sol.

(Walp. Ann. III. 921).

1. **DIPLAX TASMANICA** Hook fil. (Fl. Tasm. 2. p. 105, f. 155 B): glaberrima, culmis caespitosis basi foliosis (foliis planis) superne gracilibus, racemo brevi rarifloro, spiculis longe pedunculatis, gluma superiore obtusa inferiore ter majore paleis ¼ breviore, fl. neutr. paleis breviter aristatis, fl. hermaphr. palea inferiore subacuta, staminibus 2.
Habitat in Tasmania: Recherche Bay (Gunn). Gramen molle, caespitosum, pedale. Folia 4 poll. longa, ¼ lata. Racemus e spiculis 6—8, ⅔ poll. longis compositus.

2. **DIPLAX POLYNODA** Hook. fil. (Fl. Nov. Zel. p. 290); glaberrima, culmis gracilibus elongatis nodosis ramosis, foliis angustis, racemis simplicibus paucifloris, spiculis inferioribus breve pedicellatis, paleis fl. neutris breviter aristatis, inferiore paulo brevi ore fl. hermaphr. palea inferiore acuta v. mucronata, staminibus 4.

Habitat in Nova Zelandia: Northern Island, in parte orient. ad basin jugi Ruahine: *Colenso.*

BECKERA Fresen.

(Endl. gen. suppl. I. p. 1353 n. 749/1).

Figari et de Notaris fragm. Agrost. aegyptiacae in Memorie dell. acad. di Torino 1854 p. 320.

Locustae a dorso tereti-compressae, 1-florae hermaphroditae. Gluma 2-valvis exigua cupulaeformis. Valvulae membranaceae concavae obtusissimae enerves, inferior superiore paulo minor. Paleae longitudine subaequales, palea inferior late ovata, subcaniculata, margine utrinque inflexa, superiorem semiamplectens, 5-nervis, ap. 2-mucronato-setigera, seta palea multo longiore e nervo medio excurrente prodeunte. — Palea superior tenuior, caniculata convoluta 3-nervis, nervis excurrentibus 3-mucronata. Paleolae nullae (?) Stam 3. Antherae lin.-oblongae. Ovar. distylum. Styli subulato-filiformes, b. connascentes, longi. Stigmata plumosula, pilis simplicibus. — Herba debilis, e nodis saepius ramosa. Locustae simpliciter racemosae. Racemi spicaeformes tenues laxiusculi longe pedunculati, axillares saepius geminati.

1. BECKERA POLYSTACHYA Fig. et Notaris in Mem. d. Acad Tor. 1854. p. 321. tab. III. 1—7.

Culmus parte inferiore non computata quae deest in specimine nostro, pedalis, tenuis flaccidus, ad nodos inferiores geniculatus, laevissimus. F. membranacea linearia, 3-millimetra latitudine aequantia, ex sp. acutato-cuspidata, laxe ciliata, cum vaginis internodiis aequalia v. breviora. Vaginae breves striulatae laxae. Ligula membranacea truncata fimbrillifera. Racemi 2 centim. longitudine vix excedentes, laxiflori, pedunculati, terminalis sofitarius, laterales ex vaginar. axilla gemini, ramulo plerumque stipati. Ped. inaequales, hic vaginam bracteaeformem vix superans, alter ea duplo saltem longior. Glumae valvulae laeves, membranaceae, marg. sub vitris acri oribus argute denticulatae. Palea inferior dorso et ad nervos praesertim scabra, 5-nervis, nervis validis prominentibus, apice 2-mucronato-setigera, nervo dorsali nempe in setam scabram palea ipsa sesquilongiorem producto, intermediis paleae apicem ciliolatum excedentibus. Palea superior inferiore paulo longior, tenuiorque, dorso superne scabrida, 3-nervis, nervis paleae apicem rotundatum excedentibus, 3-mucronata. Caryopsidem non vidimus. —

In Nubia superiore.

Tribus II. PHALARIDEAE Knth. Gram. p. 18.

(Walp. Ann. III. p. 711.)

743. COIX L.

Knth. en. I. p. 20. suppl. 16..

COIX STIGMATOSA C. Koch et Bouché. Ind. hort. Berol. 1855.

Perennis, pluricaulis, ramosa; ligula brevissima; folia undulata, gla-

berrima; spicae laterales binae ternaeve, simplices, masculae pauci-femineae unispiculatae. Stigmata elongata, densissime papillosa.

Coix Lacrymae L. affinis, sed radice perenni habituque ampliore multum discrepat C. agresti Lour. et exaltatae Willd. sunt culmi solidi, C. arundinaceae Koen. contra speciei mihi plane ignotae, spiculae axillares et subsessiles.

Folia elongata, anguste lineari-lanceolata, nitentia; spicae heterogamae: mascula pedunculo complanato longiore insidens; spicula biflora, glumis chartaceis, oblongis, acutis, multinerviis, flores totos amplectentibus; paleae membranaceae, inferior major; lodiculae duae inaequales, carnosulae, apice truncatae; pedicellus ad latus singulae spiculae brevis, spiculam incompletam et parvam gerens; spica altera et tertia feminea involucro ovato, duro, marginibus connato cum 2—3 spicis aliis abortivis et ex parte emergentibus inclusa, unispiculata; glumae involucriformes, intus spongiosae inter se connatae, florem unicum amplectentes; paleae complanatae, enerviae, carnoso-membranaceae, ovatae, in cuspidem subito attenuatae, inferior paulo major; stamina 3 effoeta; lodiculae nullae; germen ovatum, compressum: stylus ad apicem pilis papillosis obsitus; stigmata duo, densissime papillosa, elongata.

2. COIX LACRIMA Beauv. (Knth. Agr. p. 20. 1). Büse in plant. Jungh. Ill. p. 386.

γ. *oocarpa* Büse; involucro parum nitente, ovali fere symmetrico.

Hab. ins. Javae per Weltevreden. (Jungh.)

(745). CRYPSIS Ait.

(Knth. en. I. p. 22. suppl. 17).

1. CRYPSIS SCHOENOIDES (L.) Lam. β. *minor* Lge. (pugill. I. p. 25): pusilla, ramis abbreviatis, 1—3-pollicaribus; foliis brevibus, latis, rigidis; capitulis ovato-globosis a forma typica differt. Habitu ad *C. aculeatam* accedit. „thyrsis ovoideis vaginam vix excedentibus" Willkomm et Lange Prodr. fl. hisp. I. p. 39.

Hab. ad ripas glareosas lacus salsi Ontigola pr. Aranjuez.

2. CRYPSIS ALOPCUROIDES Schrad. — β) *tenella* Heuff. (Verh. d. zool.-bot. Vereins z. Wien. 1858. p. 224): culmis erectis foliisque herbaceis mollibus, spicis gracilibus longe exsertis. — Ad vias sylvarum Banatus Temesiensis.

3. CRYPSIS NILIACA Figar. et de Notaris Acta Tor. 1854. p. 322. tab. IV. 1—9.

Ambigit haec Crypsis aculeatam inter et schoenoidem, sed ab utraque characteribus luculentis compluribus distincta. Ab aculeata prae caeteris fl. racemoso-spicatis, palea superiori 2-nervi, staminibus 3 differt; a Schoenoide racemis rarifloris, glumae valvulis mucronato-aristatis, palea superiore fortiter mucronata, flosculis demum conspicue minoribus.

In insulis Niliacis Aegypti inferioris — cfr. l. c. descript. ampliam.

4. CRYPSIS AEGYPTIACA Tausch.; Fig. et Notaris. Acta Tor. 1854. p. 325. tab. V. f. 1—8.

In insulis Nili alibique in Aeg. inferiore Fl. Januario et Febr.

Cfr. plantae descr. l. c.

C. Alopecuroides Del. Fl. aeg. p. 73. et 131. tab. 9. fig. 1; non Schrader.

746. MIBORA Ad.

1. MIBORA DESVAUXII Lange (pugillus plant. inprimis hispanic. I. p. 24): 2—4-pollicaris, folia laxa et plana, latiora et longiora quam in *M. minima*, dimidium culmorum et ultra attingentia, spiculae magis remotae (singula spicula basin — nec medium ut in

M. minima — proximae attingens), color totius herbae pallidus — Willk. et Lge.: Podromus fl. hisp. I. p. 38. — *Agrostis minima* Schousboe.

Hab. in collibus arenosis Galliciae ubi abundat. (c. Lugo et Santiago de Compostela Lge.), in Lusitania (Shousboe) et Gallia austr. (Lge.).

2. MIBORA MINIMA. Desv.

Explor. scient. de l'Alg. phaner. p. 60.

747. ALOPECURUS Linn.
(Walp. Ann. III. p. 711).

1. ALOPECURUS CASTELLANUS Boiss. et Reut. (Diagn. 26) differt ab *Al. pratensi* colore glaucescente, thyrso ovoideo-oblongo $^{3}/_{4}$—1''' l. glumis non nisi basi connatis, ad carinam longissime ciliatis, arista palea subduplo longiore. — Phalaris utriculata Schoush. sec. Willk. et Lge. Prodr. fl. hisp. I. p. 40.
Hab. in pascuis regionis inferioris Castellae novae (ad fl. Manzanares, circ. Chamartin, Guadarama, Aranjuez, *Reut.*, Escorial, Gulopar. *Lge.*) atque Estremadura (arroyo del Puerto *Schousb.*).

2. ALOPECURUS (EUALOPECURUS) LAGURIFORMIS Schur. Wiegmanns Archiv. 1852. I. p. 362, rhizomate repente, foliis planis, superioribus vagina ventricosa brevioribus stolonum angustioribus, ligula abbreviata, panicula ovoideo oblonga, glumis basi connatis elliptico-lanceolatis, apice recto acutis, carina longe sericeo ciliatis florem obtusiusculam paullo superantibus, arista paleae tertia parte supra basin inserta geniculata, glumas fere duplo superante, stylis inferne connatis. — Medius inter *A. pratensem*, et *A. glaucum* Less.
Hab. in Transsilvania, in Carpathis meridionalibus.

3. ALOPECURUS CASSIUS Boiss. (Sect. *Colobachne*).
Diagn. pl. or. XIII p. 41.

A. perennis glaber radice perenni culmis caespitosis basi vix fibroso-vaginatis, foliis planis anguste linearibus glaucescentibus margine scabris inferioribus expansis caulinis paucis vagina elongata subdilatata, limbo brevi, ligula ovata denticulata, panicula spicaeformi terminali oblonga, ramis paniculae 4—5floris, glumis oblongo-lanceolatis aequalibus basi connatis undique dense hirsutis apice divergentibus in aristam brevem attenuatis, flosculo glumis parum breviori, palea superiori glabra trinervi apice oblique truncata obsolete tridentata superiori breviori anguste lanceolata uninervi, arista ad tertiam partem inferiorem dorsi paleae inferioris inserta incurva flosculo duplo longiori spiculam superanti.

Habitat in regione alpina montis Cassii. Legi Junio 1846.

Affinis *A. vaginato* qui differt vaginis omnium foliorum culmorum valde inflatis, radicalibus setaceo-linearibus, spicis majoribus ovato-rotundis, glumis densius et longius hirsutis, flosculo apice hirtulo. *A. Gerardi* aristis inclusis etc. longius distat.

4. ALOPECURUS AUCHERI Boiss. in Kotschy pl. Pers. bor. 1845 (Sect. *Eualopecurus*).
Boiss. diagn. l. c. p. 41.

A. perennis rhizomate fibroso stolones repentes longiusculos edenti, collo vaginis in fibras solutis stipato, foliis planis viridibus glabris radicalibus abbreviatis fere expansis, superiorum vagina elongata subinflata striata limbo brevi, ligula brevi truncata glabra, panicula spicaeformi ovato-oblonga ramis 3—5floris, glumis oblongo-lanceolatis subaequalibus carina praesertim hirsutis in aristulam eis quadruplo breviorem attenuatis basi breviter connatis, glumella unica glumis tertia parte breviori apice eroso-truncata glabra basi arista geniculata spicula duplo longiori obsita.

Hab. in monte Elbrus Aucher No. 5457, ad nives deliquescentes ejusdem jugi supra pagum Asadbar Kotsch. loc. cit. No. 464.

Pedalis vel altior, spicae 8—9 lin. longae. Habitus *A. Gerardi* a quo praeter glumellae superioris defectum differt valvis longius aristulatis, corollae arista multo longiori. *A. vaginatus* foliis inferioribus angustissimis etc. longius distat.

5. ALOPECURUS ANTHOXANTHOIDES Boiss. (Sect. *Eualopecurus*). Boiss. diagn. I. c. p. 42.

A. annuus glaber, radice fibrosa, culmis tenuibus erectis ascendentibusve, vaginis striatis suprema praesertim elongata inflata, limbo lanceolato acuminato rigidulo, ligula truncata tubuloso-convoluta, spica terminali ovato-oblonga subdisticha, glumis oblongo lanceolatis acutis compressis carinato-subalatis albidis viridi-trinerviis carina hirto-scabridis praeterea basi marginibus et carina ciliatis aequilongis superiori angustiori, glumella unica glumam aequanti ad 2/3 usque utriculiformi lanceolata acuta trinervi glabra basi arista geniculata spicula subtriplo longiori aucta.

Habitat in monte Cassio Syriae borealis.

Habitus omnino, spicarum et spicularum magnitudo *Anthoxanthi aristati* Boiss. Voy. Esp. = *A. Carreniani* Parlat. sed spiculae uniflorae, glumella solitaria utriculiformis *Alopecuri*. Ab omnibus hujus generis speciebus spica subdisticha spiculisque magnis distinctissima, juxta *A. utriculatum* collocanda.

6. ALOPECURUS NIGRICANS Horn. β SUBMUTICUS Lge. (pug. I. p. 25); Willk. et Lge. Prodr. fl. hisp. I. p. 40. — Bull. Mosc. 1842. p. 527. Rhizoma repens; ligula brevissima, truncata, ciliata, dorso pubescens, vagina folii superioris ventricosa; arista nulla v. brevissima ad medium fere paleae obtusae egrediens. — *A. muticus* Kar. et Kir. Bul. exs. Alg. 963, Steud. Synops. p. 148. n. 10. — *A. pratensis* β. *ventricosus* Coss. et DR. expl. Alg. excl. synon.

Habitat ad rivulas prope oppidum Jaen (5. Maj.) Plurimis convenit cum *A. nigricante* Horn., sed ex mea sententia nec cum *A. pratensi* nec cum *A. Castellano* associari debet, quas omnes species in unam conjungunt Coss. et DR.

7. ALOPECURUS GENICULATUS L. — Hook. fil. Fl. Nova Zeland p. 290. *A. australis* Nees in Mitchells Australia.

Hab. Nova Zeland. locis palud. Northern et Middle Islands. Ora orient. *Colenso*, Centerbury *Lyall*.

8. ALOPECURUS FALLACINUS Gren.

Florula Massil. advena 1859. p. 21.

Radice longè lateque stolonifera, culmo foliisque virentibus, ligula brevi; glumis calycinis basi liberis, dorso villosis, ap. acutis et rectis.

Species affinis A. pratensi et nigricanti sed notis citatis distinctissima.

In vicinitate Massiliae.

750. PHLEUM Lin.

(Walp. Ann. III. p. 712).

1. PHLEUM GRAECUM Boiss. et Heldr. in pl. Graeciae 1848. — Boiss. diagn. XIII. p. 42.

Ph. annuum glabrum radice fibrosa, culmis e collo pluribus erectis foliosis superne rubellis, foliis viridibus laeviusculis, inferioribus anguste linearibus sub anthesi jam exsiccatis flexuosis superiorum vagina elongata subdilatata limbo lanceolato vagina multo breviori, ligula oblonga truncata subglabra culmum involventi, spica e folio supremo remotiuscula cylindrica densa, spiculis compressis, glumis lanceolatis carinato-

plicatis superne modice divergenti-incurvis in aristam brevem acuminatis dorso viridibus carina a medio sursum longe ciliato-pectinatis margine late membranaceis et superne brevius tenuiusque sub lente hirtulis, flosculo glumis sextuplo minori oculo nudo vix perspicuo glaberrimo, palea inferiori ovata apice truncata erosula quinquenervi superiorem multo angustiorem obtusam involventi, rudimento flosculi secundi nullo.

Hab. in campis sterilibus prope Athenas Heldr. Apr. 1848.

Culmi 10—14 pollicares, spica 1 1/2-2 poll. longa diametro 3 1/2-4 lin. lata, glumae sesquilineam aut paulo amplius longae. Species pulchella affinis *Ph. arenariae* quod praeter rudimentum flosculi superioris differt culmis humilibus, spicis abbreviatis, glumis introrsum nec extrorsum curvatis etc. Habitus *Ph. Boehmeri* caeteris neglectis radice perenni diversissimi.

Obs. I. Crypsis pygmea Jaub. et Spach. Illustr. pl. Orient. tab. 307 est *Rhizocephalus Orientalis* Boiss. Diagn 5.

Obs. II Pappophorum Aucheri Jaub. et Spach. Illustr. pl. Orient. tab. 328 est *Enneapogon Persicus* Boiss. Diagn. 7.

2. PHLEUM PRATENSE L. — Steud. Synops. p. 150. — abbreviatum Boiss. (Voy. II. 663.) culmi caespitosi 2—4" l., foliis latis planis thyrso ovoideo s. oblongo $^{1}/_{4}$-$^{1}/_{2}$" l. (P. mycrostachyum Nym. Syll. ?) Ex Willk. et Lge. Prodr. fl. hisp. I. p. 39.

Hab. in Hispania: Sierra Nevada, reg. alp. ad 6500—9500'. *Bs.*, *Wk.*, *Fk.*

3. PHLEUM ALPINUM L. — Steud. Synops. p. 150. α *genuinum* Wk. (Prodr. fl. hisp. p. 40). rhizoma fibrosum repens, thyrsus nigricans v. violascens, β *tuberosum* Wk. (l. c.), rhizoma nodoso incrassatum; thyrsus pallide virens.

Hab. etiam in Hispaniae regione montana et subalpina passim, β. in S. de Moncayo.

753. PHALARIS L.

(Knth en. plant. I. 30 et I. 2 p. 23).

1. PHALARIS PARADOXA L. (Knth. en. I. 33.). Explor. scientif. de l'Algerie phanerog. p. 24. — *Ph. praemorsa* Lmk. Enc. — var. α. *intacta*. — Panicula majore; spiculis imperfectis haud praemorsis.

Var. β. *intermedia*. — Spiculis imperfectis ramorum inferiorum tantum praemorsis. Var. γ. *praemorsa*. — Spiculis imperfectis ramorum omnium praemorsis, cuneatis, minimis obtusissimis.

Ph. appendiculata Schulte — Ph. dentata Sieb. pl. Alg. sicc.

Hab. in cultis pr. Alger., in Hispania australiore; Aegypto; Abyssinia. —

2. PHALARIS AMBIGUA Figari et Notaris Acta Tor. 1854. p 327 tab. VI. f. 1—7. Characteribus validioris momenti, nempe flosculo, rudimento floris sterilis lineari-lanceolato squamaeformi instructo, c. Phalare minore et Ph. gracili cl. Parlatoris apprime congruit, attamen nulli tute subscribenda. A Ph. minore, in Liguria haud rara, diff. locustis amplioribus, sub vitro scabridis, valvular. alis plerumque abrupte desinentib. panicula breviore: a Ph. gracili vero vagina superiore, numquam in vivis speciminib. aphylla, panicula duplo saltem majore, ligula ovata, valvularum ala truncata excurrenteve. —

In arvis Aegypti centr. et inferioris Januario et Febr. —

Cf. l. c. pl. descr. amplam.

3. PHALARIS PSEUDO-PARADOXA Figari et Notaris in Act. Tor. 1854 tab. VII. 1—11. A communi Ph. paradoxa facile insignitur locustis omnib. flosculorum neutrorum pedicellatorum pari utrinque auctis; glumae valvulis ala dentiformi, rarius denticulata

praeditis, singulque b. conjunctis, 9-nerviis. Panicula nitoris omnino expers, magis quam in paradoxa compacta, locustae perfectae glabrae. Num lusus Ph. paradoxae? —

Vide l. c. pl. descr. amplam.

754. HOLCUS L.

(Knth. en. I. 34, et suppl. p. 21).

Considérations sur la structure de quelques espèces du genre *Holcus* par MM. B. Balansa et J. Groenland. Bulletins de la Soc. bot. de France, I. p. 865.

1. HOLCUS CAESPITOSUS Boiss. voy. p. 636 t. 173 a.

Perennis radice caespitosa fibrosa, culmis humilibus b. ramosis, f. velutino-glaucescentibus, panicula ovata aequali pauciflora, flosculo utroque hermaphrodito, glumellis externis amborum aristatis, arista geniculata calycem superante.

H. caespitosus Boiss. in bibl. univ. Gen. Febr. 1838. — El. n. 184. — Webb Otia Hisp. tab. I.

Radix fibrosa perennis, caet.

In glareosis regionis nivalis abunde, Sierra Nevada in declivitate montis Mulahacen, Vacares versus, in valle summo Corral de Veleta pulcherrimus. Alt. 8000—10000'. Fl. aest.

2. HOLCUS GAYANUS Boiss. Voy. p. 637. tab. 173b.

Radice annua fibrosa, culmis tenuibus humilibus foliosis, f. hirtulis limbo brevi panicula terminali pauciflora subcontracta, pedicellis scabridis glumis inaequalibus attenuato-acuminatissimis carina scabris caeterum glabris, flosculo inferiori mutico sessili b. nudo, superiore pedicellato b. piloso, glumella exteriori supra aristae insertionem bifida paulo infra ap. arista longe exserta, ad med. geniculata, ea quadruplo longiori instructa.

H. tenuis Gay in schedis Durieu pl. exs. non Spreng. Radix fibrosa, caet.

Hab. in rupestribus montium Asturiae loco la Penna de Santa Anna dicto, ubi Durieu detexit anno 1833. —

755. HIEROCHLOA Gm.

Knth. en. I. 35 et I. 2. p. 25).

1. HIEROCHLOA BOREALIS R. S. Steudel Synops. p. 18. Hook. fil. fl. Nova Zeland p. 300. — *H. Fraseri* Hook. fil. fl. ant. p. 93.

Hab. in Nova Zelandia: northern et middle island; in cacumine montis Ruabine Colenso: in montibus prope Nelson (Monro).

2. HIEROCHLOA ORIENTALIS Fries et Heuffel Verh. d. zool-bot. Gesellsch. zu Wien. 1858. p. 224): panicula coarctata, densa pedicellis glabris erectis, floribus pubescentibus, hermaphrodito mutico, masculis margine barbatis, sub apice brevissime aristatis, foliis lanceolato-linearibus, utrinque margineque scabris; radice repente. — In agris arenosis legionum Illyrico- et Teutonico-banaticarum. Apr. Mai.

756. ANTHOXANTHUM.

(Knth. en. I. 37 et suppl. p. 28).

ANTHOXANTHUM OVATUM Lag. — Knth. l. c. p. 38. — Lag. (nov. gen. sp.)

Annuum, multiculmis culmis ½ — 1' l. thyrso 1—1½" l. ovato oblongo, basi truncato, compacto, glumis dorso et margine longe ciliatis, floribus sterilibus fertili dimi-

dio longioribus, inferioris arista glumam superiorem aequante. — Boiss. Voy. II. p. 637! Ex Willk. et Lge. Prodr. fl. hisp. I. p. 38.

Hab. in sabulosis litoralibus Hispaniae australis prov. Etiam in Sicilia et Graecia.

2. ANTHOXANTHUM ARISTATUM Boiss. Voy. p. 638. Lange pug. I. p. 27. exsicc. n. 18. Willk. et Lge. Prodr. fl. hisp. p. 38. — *A. Carrenianum* Parlat. plant. nov. p. 37. Steud. Synops. p. 13.

Hab. in graminosis regionis mont. regni Legion (Pto. de Manzanal) et utriusque Castell. (prope Madrit; Carr., et Escorial (Guadarrama, Lge.). In Algeria et Sardinia insula.

Ab *Anth. Puelli* (quocum etiam ab Ill. Boissier olim confusum) differt: panicula spiciformi ovali v. ovali-oblonga, basi dilatata non truncata, densa, spiculis majoribus, glumis velutinis, flosculis sterilibus flosculum fertilem duplo superantibus, glumis longioribus et angustioribus, culmis robustioribus, basi raro ramosis.

3. ANTHOXANTHUM PUELLII Lecoq et Lamotte (Cat. pl. Auvergne p. 185):

Panicula spiciformi, parum laxiuscula, oblonga, apice attenuata, viridi; glumis lanceolatis, acutis, cuspidatis, glabrescentibus, inferiore uninervia, superiori duplo longiori, tenuissime punctulata, trinervia; flosculis sterilibus velutinis, flosculum fertile fere duplo superantibus, inferiori supra basin arista glumam superiorem tertia parte longiori, geniculata, eleganter striata, dimidio parte inferiori subcontorta armato; flosculo sterili superiori sub apice arista recta multo breviori instructo; flosculis fertilibus glabris, parvis, lucidis; foliis pallide viridibus, brevibus, planis, linearibus, acutis, glabris vel basi ciliatis; ligula oblonga, culmis valde gracilibus, basi ramosis; radice annua, fibrosa. — Culmis gracilioribus magisque ramosis, thyrso laxo, glumis glabriusculis ab *A. aristato* Boiss. discernitur, cujus forma typica inter *A. ovatum* Lag. et *A. Puellii* exacte intermedia est, quare hae 3 species annuae in unam verosimiliter jungendae (ut etiam voluerunt cell. Coss. et DR.) minime vero cum A. odorato associandae — DR. pl. Gérard. p. 26. — Gren. et Godr. Fl. Fr. III. p. 443. — Willk. et Lange Prodr. Fl. hisp. p. 38. Lange pugill I. p. 27. A. odoratum β. laxiflorum St. Am. Flor. Agen. p. 13. — A. odoratum β. Puellii Coss. et DR. expl. Alger. p. 21. — A. aristatum Bor. Flor. centre 2. p. 576. Lloyd. Fl. orient. p. 505. (non Boiss.) A. aristatum β. laxum Lge ind. hafn. 1853. p. 2 exsicc. n. 19. — Puel et Maille herb. Flor. loc. n. 13, 35, 79. Bill. exsiccat. n. 1578.

Hab. in ericetis, campis incultis et inter segetes Galliae, Hispaniae et Lusitaniae pl. locis. — Formam praecocem pumilam ad la Albayda legit Lange, similisque in herbario Schousby pr. Trujillo Estremadurae lecta exstat.

Tribus III. PANICEAE Knth. Gr. p. 40.

761. PASPALUM L.

(Walp. Ann. III. 712.)

v. Schlechtendal in Linn. XXVI. p. 256—284. Die Gattung Paspalum nach Steud. syn. et Kunth.

1. PASPALUM SCROBICULATUM Linn. — Hook. fil. Fl. Nov. Zeland. p. 291. — *P. orbiculatum* Forst. Prodr. A. Rich. Flor. A. Cunn. Prodr. — *P. venustum* Banks et Sol. Mss.

Hab. Nova Zelandia. — Northern and Middle Islands: Banks et Soland.

2. PASPALUM DISTICHUM Burm. — Hook. fil. Fl. Nov. Zeland. pag. 291. — *P. vaginatum* Swartz Fl. Ind. Occ. — *P. littorale* Br. Prodr.; Trin. Ic. 10. t. 112. (Cfr. Steud. Synops. p. 20. n. 51.)

Hab. Nova Zeland. Northern island; Bay of Islands, R. Cunningham; Auckland Sinclair etc.

3. PASPALUS(M) GAYANUS(M) Em. Desv. Gram. Chil. in Cl. Gay: Fl. chilena T. VI. p. 240. 1853.

P. natans, glaucus, totus glaber; culmis flaccidis, filiformibus; vaginis inferioribus aphyllis, internodiorum longitudine; foliis anguste linearibus, carinato plicatis; spicis geminis, saepe basi nudis; rachi plana, flexuosa, angusta; spiculis solitariis, sordide lutescentibus, ovato-ellipticis, obtusis, gluma inferiora nulla vel minima; superiore 4-nervia, glabra, nervis omnibus submarginalibus; palea sterili 5-nervia; palea floris fertilis inferiore 3-nervia, obtusa, apice parce breviterque pilosa. — In maritimis prope Serena Chili (Gay).

4. PASPALUM CANESCENS Ands. En. pl. in Ins. Galopag. in K. V. Acad. Handl. 1853. pag. 132.

Incano-hirtum, spicis 6—8 alternis, in racemum elongatum dispositis, rhachi flexuosa, anguste marginata; pedicellis scaberrimis; spiculis geminis numerosis, ovato-orbiculatis, glaberrimis; culmo stricto, foliis linearibus utrinque molliter canovillosis.

Hab. in ins. Albemarle locis siccissimis elevatis (Ipse).

Radix fibris tenuissimis caet. Quaedam c. P. longe pedunculato communia habet secund. descript. Hookeri, recedit autem vaginis foliorum internodia culmi tegentibus, spicis multo longioribus, spiculis majoribus et magis numerosis, totis flavescentibus, nec gluma inferiore nigro-maculata.

762. MILIUM L.

(Walp. Ann. VI. 749.)

1. MILIUM VERTICILLATUM Boiss. et Bal. pl. orient. Exsicc. n. 1330. (1857). et Bull. Soc. bot. de France 1856. p. 169.

Culmi 2—5 vel solitarii, recti, glabri, laeves, cylindrici, glaucescentes, 1—3 decimetr. Folia lineari-lanceolata, plana, glabra; ligula oblonga, integra, usque ad basin fissa. Panicula oblongo-lanceolata, pyramidalis, ramis sub anthesi rectis, post eandem patentes vel reflexi. Rami valde scabri, 5 — 20-flores verticillum fere completum 8—20-radiatum efficientes. Verticilli inferiores saepe steriles. Spiculae pedicellis suis 3—6ies breviores. Glumae glabrae laeves vel dorso scabrae inferior lanceolata, acuta, superiore ovali-oblonga, abrupte apiculata, paullo brevior. Paleae opace brunneae, glumis sublongiores et pilis brevibus adpressis obtectae, inferior 3-nervia, ovalis scariosa et apice rotundata, superior binervia, oblonga, superiore paullo brevior. Lodiculae 2, integrae, glabrae, oblongae, acutae. Stamina 3, antheris ovali-oblongis, filamenta fere aequantibus. Caryopsis ovali-oblonga apiculata, dorso modice compressa demum cum paleis persistens; styli 2 breves, stigmata plumosa. ☉, Juni. Juli.

Habit. in pratis regionis montanae. Alma Dagh et Mourad Dagh Phrygiae, fere 1200 metr. alt. Affinis *M. trichopodo* quocum tribum glumis opacis pilis paucis obsitum singularem format. Ex hoc *M. trichopodo*, *M. poaeforme* sp. nov. in Bul. pl. Orient. exsicc. n. 1331. (1857) non est diversum.

2. MILIUM TRICHOPODUM Boiss. — Boiss. diagn. XIII. p. 45.

M. annuum glabrum glaucescens, radice fibrosa, caulibus nanis, panicula fere radicali foliis aequilonga eorumque vaginis basi involuta ambitu ovata divaricatim effusissima, vaginis striatis subdilatatis, ligula truncata glabra, limbo erecto anguste lanceolato-lineari, paniculae pedicellis setaceis rigidulis divergentibus laevibus spicula 3—4plo longioribus apice incrassatis, spiculis oblongis attenuatis, glumis oblongis acutis laevibus, glumellis glumae aequilongis sub lente adpressissime et parce puberulis.

Hab. in palude exsiccata spongiosa herbida Antilibani inter Rascheya et Damascum, legi quoque in Antilibano supra Zebdani, in Mesopotamia inter Orfa et Suerek Kotschy No. 41.

Plantula bipollicaris caules 2—5 a radice edens, spiculae eis *M. vernalis* paulo minores. M. vernale M. B. differt praeterea caule elato, glumis scabris glumellas laeves glabras manifeste superantibus.

770. PANICUM L.

(Walp. Ann. III. p. 714.)

v. Schlechtend. in Linn. XXVI. Verz. d. Panic. Art. b. Kunth. u. Steudel.

Panici species foliis plicatis, in subgenus proprium collectae auctore A. Braun in append. ind. sem. hort. Berol. 1855.

In hortis botanicis recentiori tempore unicam tantum Panici speciem foliis plicatis divulgatam vidimus, Panicum scilicet plicatum Auct. s. palmifolium Poir., quum P. plicatum P. Lam., sub finem saeculi praeteriti in horto Parisiensi cultum, jam dudum evanuerit. Hodie aliam, eamque pulcherrimam et cultura dignissimam hujus sectionis speciem nuper e seminibus Brasiliensis enatam *P. sulcatum* Aubl. offerre nobis licet. Inter reliquas quoque vasti generis species, quae foliis plicatis gaudent, complures statura et foliorum amplitudine non minus insignes sunt, quae, ut in hortos introducantur, valde optandum est, et inter quas *P. neurodes* Schult. cum varietatibus primarium locum tenet. Species foliis plicatis omnes, quarum plurimas in herbario regio Berolinensi examinandi venia mihi erat, quamvis huousque in variis sectionibus dispersae fuerint, in subgenus unum et proprium, ut sequitur, definiendum colligendas esse haud dubium mihi est.

PTYCHOPHYLLUM Al. Braun l. c.

(Subgenus Panici.)

Foliorum ligula brevis densissime ciliata; lamina aequilatera, basi sensim (in foliis inferioribus saepe in petiolum) attenuata, vernatione longitudinaliter conduplicata et secundum nervos angulo acutissimo e costa mediana progredientes profunde plicata. Panicula aut laxa et pyramidalis, aut condensata et in thyrsum spiciformem elongata, ramis simpliciter aut composite spiciformibus. Axis paniculae primaria, rami et praesertim ramuli inferiores apice plerumque in setam sterilem plus minusve elongatam abeuntes, spiculis pluribus intra setam terminalem alternatim dispositis, quibus antecedunt ramuli nonnulli setiformes spiculam unicam ad basin gerentes. Spiculae subsessiles vel breviter pedicellatae, teretiusculae vel a dorso compressae, glabrae, muticae. Gluma prima semper et multo, secunda plerumque spicula brevior, tertia (floris masculi vel neutrius) et quarta (floris hermaphroditi) inter se subaequales, aut quarta paulo brevior. Lodiculae truncatae. Stigmata plumosa, aut purpurea, aut albida.

Subgenus *Setariae* proximum. Setae aut elongatae easque valde conspicuae, aut breves et parum conspicuae; in nonnullis rami nunc setigeri nunc spicula terminati; in una specie (*P. plicato* Lam.) rami primarii omnes spicula terminati, sed ramuli infimi in setam brevissimam abeuntes, ita ut in nulla specie setae omnino desint. Species omnes perennes esse videntur, aut caespitosae, aut repentes, pleraeque foliis late lanceolatis amplis insignes.

1. PANICUM PLICATUM Lam. Ill. gen. I. (1791) p. 171. Enc. meth. IV. (1795) p. 736. — A. Br. l. c.

Perenne: culmo erecto debili; foliorum vaginis glabris, sub lamina pilorum annulo parum conspicuo cinctis; lamina lanceolata, longe acuminata, supra pilis rarissimis

majoribus, subtus minoribus adspersa, demum denudata, margine et secus nervos utrinque scabra; panicula gracili elongata angusta, ramis remotis, abbreviatis, simpliciter spiciformibus, in spiculam terminalem abeuntibus; spiculis confertiusculis, infimis ramulo setiformi spicula breviori lateraliter insidentibus; gluma prima spicula ²/₃ breviore, obtusiuscula, trinervi: secunda spicula ¹/₃ breviore, acutiuscula, quinquenervi; tertia apice in mucronem convoluta, quinquenervi, glumellam depauperatam includente: quarta quam tertia vix breviore, acuminata, dorso evidenter punctato-rugulosa.

Sequente multo debilius. Folia in speciminibus visis 5—10" (sec. Lam. 9—15" longa, 5—7"' lata, molliora, longius acuminata. Inflorescentiae rami 5—6"' longi, spiculis inferiorum 10—11, superiorum sensim paucioribus, omnibus pedicellatis, pedicello dimidia fere spiculae longitudine. Stigmata purpurea.

Planta olim in Horto Parisiensi culta orginem ex insula Franciae duxisse dicitur vel opinione aliorum ex insula St. Domingo. Conf. Lam. Enc. l. c. (vidi specimen herbarii Lamarkiani, nunc Roeperiani, in horto Par. 1790 lectum, et alterum in herbario Willdenowiano asservatum, a cl. Desfontaine datum).

2. PANICUM PALMIFOLIUM Poir. Enc. meth. Suppl IV. (1816) p. 282. — Al. Br. l. c.

P. plicatum Roxb. in lit. ad Jacq. et Willd. 1806. Flor. Ind. or. I. (1820 et 1832) p. 311.
P. plicatum Willd. Enum. h. Ber. (1809) II. p. 1033.
P. plicatum Jacq. Ecl. Gram. (1813) t. I.
P. plicatum Schrank pl. rar. h. Mon. I. (1819) t. 19. — Trin. Sp. Gram ic. ill. II. 1829) tom. 223.
P. asperatum Kunth En. (1833) p. 126.

Perenne; culmo erecto; foliorum vaginis pilis patentibus plus minusve hirsutis, ore pilis longioribus patentissimis ciliatis et dorso sub lamina pilorum erectorum cingulo instructis; lamina late lanceolata, brevius acuminata, utrinque aequaliter pilosa, margine et subtus ad nervos scabriuscula; panicula erecta, pyramidali, laxa, ramis strictis demum patentissimis composite spiciformibus, ramulis brevibus spiculisque adpressis; rachi piloso-scabra, apice, ramis ramulisque nunc spicula terminatis, nunc in setam spiculas vix superantem abeuntibus; spiculis minus confertis; gluma prima spicula ²/₃, rarius dimidio breviore, obtusa vel acutiuscula, quinquenervi; gluma secunda spicula vix ¹/₃ breviore, apiculata, septemnervi; tertia apice in mucronem brevem convoluta, quinquenervi, glumellam depauperatam includente; quarta longitudine fere tertiae, brevissime apiculata, tenuissime punctato-rugulosa.

Folia 1—1½' longa, 12—25"' lata. Panicula 6—9" longa, basi ramis expansis 2—4" lata, ramis inferioribus 1—2" longis. Spiculae in ramulis 7 et sensim pauciores, superiores subsessiles, inferiores pedicello spicula quadruplo breviori insidentes, pallide virescentes, rarius violascentes, 3mm. fere longae. Stigmata purpurea. Setae praesertim in speciminibus macrioribus observandae.

Planta e Sumatra in hortum botanicum Calcuttae introducta a Roxburghio ad Jacquinum et Willdenowium anno 1806 missa est, ex quo tempore in hortos Europaeos divulgata est. Vidi specimen Roxburghianum ex horto Calcuttensi in herb. Willdenowiano, quod e planta hortensi nostra specie non differt. Specimina spontanea nullibi in herbariis prostant et icones citatae omnes ad plantam hortensem exhibitae sunt.

3. PANICUM NEURODES Schult Mant. II. (1824) p. 228.

P. nervosum Roxb. Fl. ind. I. (1820 et 1832) p. 311 et 311. — Al. Br. l. c.
P. nepalense Spreng. Syst. I. (1825) p. 321. Kunth Enum. p. 94. Steud. Syn. p. 49.
P. Kleinianum Nees herb.

Perenne; culmo erecto; foliorum vaginis elongatis, verrucoso-strigosis, demum denudatis, ore barbatis, pilorum cingulo dorsali ad originem laminae nullo aut incompleto; lamina lanceolata, supra pilis setiformibus longioribus raris, subtus pilis minoribus crebrioribus vestita, vel denudata, utrinque ad nervos aspera; panicula recta (aut apice cernua), laxa, ramis elongatis demum patulis composite et interrupte spiciformibus; ramulis spiculisque subadpressis; rachi scabra, apice, ramis, ramulisque in setam spiculis (plerumque) longiorem abeuntibus; spiculis laxe alternis; gluma prima spicula ³/₄—¹/₆ breviore, obtusa vel acutiuscula, 3—5-nervi; secunda spicula ¹/₆—¹/₄ breviore, acutiuscula, 5—7-nervi, tertia apice in mucronem plus minusve elongatum convoluta, 5-nervi, glumellam depauperatam includente; quarta tertiam longitudine aequante vel breviore, apiculata, longitudinaliter subtilissime striata et transversaliter punctato-rugulosa.

A praecedente differt vaginarum pilis rigidioribus, plerumque adpressis, verrucis evidentioribus insidentibus; pilis in superficie laminae, ubi adsunt, longioribus, setiformibus; paniculae ramis longioribus et magis interruptis, saepe filiformibus; ramis ramulisque constanter in setas (longiores) abeuntibus; spiculis plerumque magis acuminatis; stigmatibus, ut videtur, albidis. Caeterum quam maxime polymorphum est, culmo debiliore vel crassiore, foliis angustioribus vel latioribus, panicula macra et pauciramea vel speciosa et multiramea, spiculis majoribus vel minoribus, denique pubescentia partium, setarum longitudine, glumarum longitudine relativa et nervorum numero varians. Varietas *Kleiniana* et *Roxburghiana* genuinum *P. neurodes* sistunt. *P. amplissimum* et *lene* Steudelii charactere essentiali distinguere nequeo: his accedit var. *Thwaitesii*, quae pubescentia insignis est. Forte ad hanc speciem, per Indiam orientalem late divulgatam, etiam *P. palmaefolium* König e regno Siamensi spectat (Naturforsch. 23. Stück, 1788, p. 201). Varietates mihi sunt:

α. *conjungens*, foliorum vaginis subnudis; lamina late lanceolata, utrinque nuda; panicula latius pyramidata, abbreviata, ramis patentissimis rigidioribus; setis spicula vix vel paulo tantum longioribus; spiculis latioribus pallidis; gluma prima spicula ³/₄—²/₃ breviore, trinervi; secunda spicula dimidio breviore, 5-nervi; quarta tertiam aequante vel paululum superante, subtilissime striata et punctata, vix transverse rugulosa.

Habitu et inflorescentia proxime accedit ad *P. palmifolium*.

In Nepalia (Royle No. 27. in herb. Nees ab E. sub *P. Kleiniano a*).

β. *Kleinianum* (*P. Kleinianum* α Nees. herb.), vaginis subnudis; lamina angustius lanceolata (6—10‴ lata) superne parcissime setulosa, inferne tenuissime pilosa, demum denudata; panicula elongata, pauciramea, laxissima, ramis strictis; setis spicula duplo vel triplo longioribus; spiculis angustioribus pallidis; gluma prima spicula ²/₃ breviore, 5-nervi; secunda spicula ¹/₆ breviore, 7-nervi; quarta tertiam aequante, evidentius rugulosa.

In peninsula Indiae orientalis (Wight No. 26); prope Courtallum (No. 1029); in Malabaria (No. 1617).

γ. *blepharoneuron*, culmo debili; foliis minoribus; vaginis parcissime strigosis, demum denudatis; lamina anguste lanceolata (5—6‴ lata), supra setulis majoribus secus nervos regulariter seriatis munita, subtus nuda; panicula macra, minus interrupta et minus expansa, ramis valde flexuosis; setis spicula quadruplo ad quintuplo longioribus; spiculis saepe coloratis paulo minoribus, gluma prima spicula ²/₃ breviore, 3—5-nervi; secunda ¹/₆ breviore, 7-nervi; quarta tertiam aequante, evidentius rugulosa

In Nepalia ubique et per totum annum vigens (Wallich No. 8703.)

δ. *Roxburghianum*. (P. Kleinianum β. Nees herb.); culmo altiore et robusto; foliis amplioribus; vaginis parce strigosis, demum denudatis; lamina latius lanceolata (14—18‴ lata), superne parce setulosa, inferne tenuissime pilosa; panicula speciosa: 1½′ et ultra longa), multi- et longi-ramea, erecta, ramis inferioribus filiformibus

saepe arcuatim-pendulis; setis spicula duplo triplove longioribus, spiculis minoribus (3mm. fere longis) subfuscescentibus: gluma prima spicula ²/₃ breviore, 3-nervi; secunda ¹/₃ breviore, 5-nervi: quarta tertiam aequante.

In Nepalia (Wallich Nr. 8702. in herb. Nees ab E.), prope Courtallum (Nr. 1014. et in Bengalia prope Sillet (No. 8702 in herb. Kunth).

ε. *amplissimum* (P. amplissimum Steud. Syn. p. 54; P. Kleinianum Nees in Hook. Journ. of Bot. 1850), altissimum; foliis amplis; vaginis insigniter tuberculatis, strigosis; lamina late lanceolata (12—25‴ lata), omnino denudata; panicula speciosissima (ad 2′ longa), multi- et longi-ramea, erecta; setis spicula duplo triplove longioribus; spiculis minoribus (3 mm. longis) subfuscescentibus; gluma prima spicula ²/₃ ad ¹/₂ breviore, 3-nervi (perraro 5-nervi); secunda ¹/₄ breviore, plerumque 6-nervi; tertia longius mucronata, quartam superante.

In insulis Philippinis (Cuming No. 553.)

ζ. *lene* (P. lene Steud. Syn. p. 54), statura, colore, foliorum amplitudine, vaginis inflorescentia et glumarum longitudine cum praecedente convenit, a quo differt lamina subtus tenuissime pilosa, gluma 3—5-nervi, secunda septemnervi.

In insula Java (Zollinger No. 815.)

η. *Thwaitesii*, culmo elato et robusto; foliis amplis; vaginis insigniter verrucosis et strigosis, nec non passim minutissime pulverulento-adspersis; lamina late lanceolata (11—13‴ lata), supra setulosa, subtus dense pilosa; panicula speciosa, apice nutante, ramis inferioribus valde elongatis pendulis; rachi aspera et parce pilosa; setis spicula brevioribus vel vix longioribus; spiculis majoribus (4mm. longis), ad glumas steriles pubescentia tenuissima e pilis microscopicis crispatim contortis vestitis; gluma prima spicula vix ²/₃ breviore, 5-nervi; secunda ¹/₄ breviore, 7-nervi; tertia longius mucronata, quartam superante.

In insula Ceylon (Thwaites).

4. PANICUM COSTATUM Roxb. Fl. ind. I. (1820 et 1832) p. 315 et 312. — Steud. Syn. p. 64. — Al. Br. l. c. — *P. Thouarsianum* Nees in Steud. Syn. p. 62:

Perenne, culmo e basi longe repente et radicante adscendente, ramoso (1½—2½″ supra terram elato); foliorum vaginis internodio multo brevioribus, inferioribus et tuberculis piliferis, superioribus nudis, margine piloso fimbriatis, cingulo pilorum dorsali carentibus; lamina late lanceolata (5—8‴ lata), longe acuminata, utrinque secus nervos pilis longioribus laxe seriatis versus marginem directis, subtus praeterea pilis inconspicuis sparsis munita, margine et ad nervos scabra, prope basin ciliis nonnullis longioribus instructa; panicula thyrsiformi, recta, ramis dense spiciformibus (pollice brevioribus) erecto-patentibus; rachi scabra et parce pilosa; ramis in setam brevissimam, ramulis in longiorem spiculas duplo vel triplo superantem abeuntibus; spiculis subunilateraliter confertis, oblongis; gluma prima spicula ³/₄ breviore, trinervi; secunda spicula ¹/₃ breviore, 7-nervi; tertia 7-nervia, glumellam ejusdem longitudinis et florem masculum includente; quarta longitudine fere tertiae, apiculata, dorso transverse rugosa.

Species a praecedentibus valde distincta, habitu peculiari gaudens. Folia tenuiora et breviora, vagina plerumque 2—4″, lamina 4—8″ longa. Inflorescentia fere Echinochloae, sed spicae laterales undique versae et densius confertae. Spiculae 2½ mm longae. Rugae transversales glumae quartae saepius gluma secunda eam tegente imitantur.

Habitat in insula Mauritii, unde 1802 in hortum Calcuttensem introductum est. Vidi specimen Wallichianum ex horto bot. Calcutt. sub No. 8689 missum, et specimen Thouarsianum sine dubio in ins. Maur. lectam in herb. Willdenowiano. Asservantur insuper in herb. reg. Berol. specimina in insula Ceylon lecta, ubi hanc speciem introductam esse suspicor.

5. PANICUM CHAMAERAPHIS Nees Mspt. (non Trin., quod est Chamaeraphis hordeacea R. Br.) — Al. B. l. c. — *P. homonymum* Steud. Syn. p. 48. —

Perenne? culmo erecto, humili et gracili: foliorum vaginis margine barbatis, caeterum nudiusculis; lamina lanceolata, longe acuminata, utrinque secus nervos pilis longioribus laxe seriatis munita, margine et ad nervos scabriuscula et prope basin ciliis nonnullis longioribus instructa: panicula elongata, laxa, erecta, ramis gracilibus, simpliciter spiciformibus, apice in setam abeuntibus: spiculis laxe alternantibus secundis, inferioribus singulatim ad basin ramuli setiformis ramuli duplo vel triplo superantis collocatis: rachi primaria et secundaria, nec non setorum basi pilis longis patulis ciliata; spiculis a dorso valde compressis, ovalibus, obtusissimis (2¼ mm. longis): gluma prima spicula ⅔ et ultra breviore, obtusissima, trinervi; secunda spiculam fere aequante, obtusa, 5—6-nervi; tertia obtusiuscula, apice paululum inflexa, 5-nervi, glumellam depauperatam includente; quarta tertiam aequante, vix apiculata: transverse rugosa.

Species valde singularis, respectu reliquorum subgeneris specierum nana, pedalis aut vix altior, forsan annua, caespitulos multicaules formans. Foliorum lamina longitudine 3—5'' vix excedens, 4—5''' lata, quoad pubescentiam cum Panico costato conveniens. Inflorescentia quam in reliquis multo simplicior, maxime regularis. Stigmata purpurea.

In Nepalia (Royle Nr. 47).

6. PANICUM FORBESIANUM Nees in Steud. Syn. p. 98:

Perenne; culmo stricto; foliorum vaginis elongatis, margine barbatis; lamina lineari-lanceolata elongata, ad basin pilis longis barbata, caeterum denudata, margine et ad nervos scabra; panicula elongata, angusta, stricta, ramis erectiusculis simpliciter spiciformibus (vel basi subdivisis), in setam elongatam abeuntibus: spiculis laxissime alternantibus, inferioribus singulatim ad basin setae spiculam duplo triplove superantis collocatis; rachi inferne brevissime pilosa, superne scabra; spiculis ovalibus, apice attenuatis acutiusculis, parum compressis; gluma prima spiculam dimidiam aequante eamque basi dilatata amplectente, acutiuscula, 5-nervi; secunda spicula paululum breviore, latissime ovata, obtusa, 9-nervi; tertia breviter acuminata, 7-nervi, glumellam paulo breviorem et florum masculum includente; quarta tertiam aequante, utrinque attenuata, longitudinaliter striolata et transverse obsoletissime rugulosa.

Inflorescentiae simplicitate ad priorem speciem accedit, sed culmus altior, 3-pedalis; folia valde elongata, angusta, ultra pedem longa, 5—7''' lata. Panicula in specimine examinato 10'' longa, ramis vix pollicem longis, spiculas ut plurimum 8—9 gerentibus.

In Nepalia (Royle No. 31.)

7. PANICUM SULCATUM Aubl. Guian. I. (1775.) p. 50. — Lam. Enc. IV. (1795) p. 746. Nees ab E. in Mart. Fl. Bras. II. p. 253. (ex parte). — Al. Br. l. c.

Perenne; culmo erecto, elato; foliorum vaginis hirsutis, ore longe barbatis et dorso sub lamina pilorum annulo adpresso cinctis; lamina amplissima, late lanceolata, breviter acuminata, supra nuda et glabra, subtus pilis minutissimis adpressis et vix conspicuis parce adspersa, ad nervos, aeque ac margine, scabriuscula: panicula thyrsoidea fusiformi vel subcylindrico-elongata, basi interrupta, superne condensata, cernua, ramis brevibus (pollicaribus, infimis nonnunquam magis elongatis), erecto-patentibus, e basi composita superne spiciformibus, ramulis spiculisque confertis unilateralibus; rachi superne breviter pilosa, ramorum scabra; setis in apice ramorum et ramulorum spicula triplo ad quintuplo longioribus; spiculis oblongo-lanceolatis; gluma prima spicula ⅔ breviore, obtusa, 3-nervi, nervis marginem hyalinum non attingentibus; secunda ⅓ breviore, acutiuscula, 5-nervi; tertia acuminata, 5-nervi, glumellam depauperatam includente; quarta tertiam fere attingente, sensim acutata, subtiliter transverse punctato-rugulosa.

Omnium speciosissimum! Culmus 5—6' altus; foliorum lamina latissima, inferiorum 1½' longa; 24—36''' lata, basi in petiolum anguste marginatum sensim attenuata; inflorescentia in speciminibus cultis 1—1½' longa, in specimine spontaneo

Sellowiano 2½' longa; setae numerosae et valde conspicuae; spiculae 2¾—3mm. longae, ¾mm. latae, virides. Gluma floris hermaphroditi albida, nitens. Stigmata alba.

In Martinica sec Plumier (Milium latifolium sulcatum Plum. Mapt. s. Milium arundinaceum latifolium foliis liratis Plum. Cat. 1703. p. 10); in Guiana sec. Aublet; in Brasilia meridionali prope Yriro (Sellow in herb. reg. Berol.); in insula St. Catharina, unde semina misit Dr. Blumenau, e quibus Martio 1854 in horto satis plantae enatae sunt speciosissimae, quae sero autumno 1855 primum florebant.

8. PANICUM CRUS ARDEAE Willd. herb. — Nees ab E. in Mart. Fl. Bras. II. (1829.) p. 253; — Steud. Syn. p. 54. — Alex. Br. ind. h. Berol. 55.

Setaria Crus Ardeae Kunth. Enum. p. 155.
? *Panicum elongatum* Poir. Encycl. Suppl. IV. (1816) p. 278. (non Pursh).
? *P. Poiretianum* Schult. Mant. II. (1824) p. 229.
? *Setaria Poiretiana* Kunth. Enum. p. 155.
? *Panicum sulcatum* Bertol. Excerpt. (1820). p. 14; Opusc. scient. 4. p. 230.
? *Setaria sulcata* Raddi Agrost. Bras. (1823) p. 50; — Schult. Mant. II. p. 278.

Perenne; culmo erecto, elato; foliorum vaginis subnudis, ore vix barbatis, dorso sub lamina pilorum annulo adpresso cinctis; lamina angustius lanceolata, supra nuda et glabriuscula, subtus pilis minimis adspersa vel subnuda, ad nervos, aeque ac margine, scabra; panicula thyrsoidea, angusta et valde elongata, satis laxa et basi saepe interrupta, ramis brevibus (pollicaribus), suberectis, e basi composita superne spiciformibus, ramulis spiculisque minus confertis unilateralibus; rachi scabra; setis in apice ramorum et ramulorum spiculam duplo ad sextuplo superantibus; spiculis ovato-oblongis, subacuminatis; gluma prima spicula ⅔ breviore, obtusa, 3—5-nervi, nervo medio marginem anguste hyalinum attingente; secunda spicula ⅓—½ breviore, subapiculata, 5—7-nervi; tertia apice convoluto-mucronata, 5-nervi, glumellam perfectam includente; quarta tertiam fere aequante, acuminata, obsolete punctato-rugulosa.

α. *longisetum*, setis spicula quadruplo ad sextuplo longioribus; gluma prima plerumque 5-nervi, secunda 7-nervi.

β. *brevisetum*, setis spicula duplo triplove longioribus; gluma prima plerumque 3-nervi, secunda 5-nervi.

Species praecedenti affinis. Culmus 3½—5' attingere videtur, in specimine Sellowiano basi geniculatus et decumbens, e nodis radicans, in specimine guianensi inde a basi erectus. Foliorum lamina in speciminibus examinatis 8—14''' lata. Inflorescentia 1—1½' longa, 1'' lata. Spiculae 3½—4 mm. longae, ¾—1½mm. latae, altero latere valde convexae, altero planae, aviculae caput fere aemulantes. Gluma floris hermaphroditi subfusca, nitida.

Cl. Nees varietatem longisetam hujus speciei cum P. sulcato commiscuit, ut e descriptione hujus in Flora Bras. elucet. P. sulcatum Bertolonii (Setaria sulcata Raddi) quoque e descriptione potius ad P. Crus Ardeae pertinere videtur, aeque ac P. elongatum Poir., quod vix recte cum P. specioso Nees conjunctum esse mihi videtur.

In America meridionali primus invenit Humboldt (vidi specimen menoum var. β. in herb. Willdenowiano); in Brasilia cum praecedente specie varietatem α. legit Sellow (herb. reg. Berol.); prope Rio de Janeiro a Raddio indicatur; specimen var. α. ibidem a cl. Ackermann (olim consule Badensi in Brasilia) lectum ipse possideo. E Guiana gallica denique var. β. e Museo Paris. sub No. 62. communicatam vidi.

9. PANICUM SPECIOSUM Nees ab E. in Mart. Fl. Bras. II. (1829) p. 252. — Al. Br. l. c.

Perenne; culmo erecto, elato; foliorum vaginis nudis vel breviter setulosis, margine ciliatis, ore breviter barbatis et dorso sub lamina pilorum annulo adpresso cinctis; lamina late lanceolata, acuminata, utrinque nuda vel subtus breviter pilosa,

supra glabra, subtus ad nervos margineque scabriuscula; panicula dense thyrsoidea angusta et valde elongata, erecta, ramis brevibus (vix pollicaribus), plus minusve patulis, e basi composita superne spiciformibus, ramulis spiculisque confertis unilateralibus; rachi scabra; setis in apice ramorum et ramulorum spicula duplo ad quadruplo longioribus; spiculis oblongo-lanceolatis, acuminatis; gluma prima spicula $^2/_3$—$^1/_2$ breviore, obtusa vel acutiuscula, 3—5-nervi; secunda spicula vix $^1/_3$ breviore, acuta, 5—7-nervi; tertia acuminata, 5-nervi, glumellam evolutam includente; quarta tertiam aequante vel paulo breviore, acuminata, transverse punctulato-rugulosa.

Ab affini P. sulcato praesertim differt culmo strictiore et, ut videtur, humiliore; vaginis plerumque nudis; inflorescentia e vagina folii supremi breviter exserta vel basi occulta, omnino erecta, magis cylindrico-elongata; spiculis longioribus, gluma prima et secunda ratione spiculae longioribus, glumella in axilla glumae tertiae perfecte evoluta glumam longitudine aequante, gluma quarta longius acuminata. Caeterum vix minus speciosum. Folia ampla, lamina 1—1½' longa; 16—26''' lata, basi in petiolum marginatum attenuata. Inflorescentia 1½—2' longa, pollicem vel paulo ultra lata. Spiculae teretiusculae, subfuscae, nitidae, 4—5mm. longae, vix 1½ mm. latae. Stigmata albida. Secundum specimina in herbario reg. Berol. asservata varietates tres distinguendae esse videntur:

α. *Martianum* (P. speciosum Nees l. c.), foliorum lamina brevius acuminata, utrinque nuda; paniculae ramis divaricatis, spiculis deorsum flexis; setis spicula subquadruplo longioribus; gluma prima acutiuscula, 5-nervi; secunda 7—8-nervi, quarta tertiam longitudine fere aequante.

β. *Pöppigii*, foliorum lamina longius acuminata, subtus pilosa; paniculae ramis erecto-patentibus, spiculis non deflexis; setis brevioribus, spicula vix triplo longioribus; gluma prima obtusissima trinervi; secunda 5-nervi, quarta tertiam aequante.

γ. *laxum*, foliorum lamina longius acuminata, utrinque nuda; paniculae laxioris et inferne magis interruptae ramis erectioribus, spiculis non deflexis; setis spicula triplo ad quadruplo longioribus; gluma prima obtusiuscula, 5-nervi; secunda 7-nervi; quarta quam tertia paulo breviore.

Var. α. in Brasiliae provincia Para legit Martius; var. β. et γ. ad fluvium Amazonum cl. Pöppig (No. 3056 et 2251).

10. **PANICUM CERNUUM** Willd. herb. Spreng. Syst. I. (1825) p. 318; Nees in Mart. Fl. Bras. p. 253; Steud. Syn. p. 53. — Al. Br. l. c.

Setaria cernua H. B. et K. Nov. gen. I. (1815) p. 111; Kunth Enum. I. p. 155.

Perenne; culmo erecto; foliorum vaginis ore pilosis, caeterum nudis, pilorum cingulo dorsali destitutis; lamina lineari, dura, supra sparse pilosa, dorso nuda et glabra; panicula in thyrsum spiciformem cylindrico-elongatum contracta, cernua, ramis densissime congestis brevibus inferne compositis, apice ramulisque seta tenui spicula duplo longiore terminatis; rachi pilosa; spiculis confertis, omnibus pedicellatis, oblongis, acutis; gluma prima dimidiam spiculam superante, spiculam basi amplectente, acuta, 3-nervi; secunda spiculam fere aequante, mucronulata, 5- (rarius 7-) nervi; tertia secundae simili, 5-nervi, glumellam perfectam et florem masculum includente; quarta praecedentibus duabus multo breviore, obtusa et vix mucronulata, transverse rugulosa.

De hac specie, cum praecedentibus inflorescentiae indole conjuncta, in reliquis vero distinctissima, valde dubius sum, utrum revera ad Ptychophylli subgenus pertineat. Folia inferiora in specimine herbarii Willdenowiani aeque ac Kunthiani desunt, superiora, quae prostant, plicis nonnullis parallelis, minus regularibus, nescio an fortuito, percursa sunt. Foliis gaudet quam in reliquis Ptychophylli speciebus multo durioribus, lamina lineari, basi parum contracta, tres lineas latitudine vix superante instructa. Nervi, quae in reliquis Ptychophyllis oblique a costa mediana excurrunt, in hac specie costae mediae (satis distinctae) paralleli, in pagina superiore magis quam in inferiore prominuli. Scabrities in nervis nulla, in margine denticuli minutissimi, imo sub lente vix conspicui. Inflorescentia 3—6'' longa, $^1/_3$—$^2/_3$''' crassa, Alo-

pecuri spicam fere aemulans. Setae quam in aliis plerisque speciebus minus conspicuae, tenues, flexuosae. Infra setam rami terminalem spiculae inveniuntur solitariae circiter 3, quibus praecedunt totidem ad basin pedicelli spicula altera brevius pedicellata auctae, porro ramuli ipsi in setam abeuntes spiculasque 2, 3 vel pluregerentes; ramuli setigeri spiculam unicam gerentes omnino deesse videntur. Pedicelli spicula nunc paulo breviores, nunc duplo fere longiores. Spiculae 3 mm. fere longae, 1 mm. latae, pallidae, albescentes.

In montanis regni Quitensis ad flumen Guallabamba legit Humboldt.

Praeter species enumeratas ad Ptychophylli subgenus forte spectant:

1) *P. megaphyllum* Steud. Syn. p. 53.
2) *P. flabellatum* Steud. ibid. p. 53.
3) *P. paniculiferum* Steud. ibid. p. 54.
4) *P. racemiferum* Steud. ibid. p. 64.
5) *P. plicatile* Hochst. Flor. 1855. p. 198.

11. PANICUM (ECHINOCHLOA) ORYZINUM Gmel. Syst. 1. 157. (1793). — Al. Br. in Ind. sem. h. b. Berol. 1851.

P. Hostii M. B. (1819).
P. stagninum Host.
Echinochloa commutata Schult. Mant.
Oplismenus Crus galli β Kunth. Enum.

A Panico Crus galli differt culmis semper erectis, paniculae ramis sub anthesi minus patulis, superioribus sensim brevioribus in spicam terminalem breviorem minus conspicuam abeuntibus, inprimis autem palea inferiore floris sterilis 5-nervia (non 7-nervia) nervis scilicet inter medianum et binos margini approximatos evanescentibus. Specimina culta, spontaneis Sieberianis ex oryzetis Aegypti caeterum similia, spiculas proferunt haud raro trifloras i. e. flore neutro et duobus hermaphroditis praeditas (Panicum mirabile A. Br. in hort. Carlsr. 1845). Semina sub diu rarius maturat, hinc in tepidario colendum.

12. PANICUM BREVIFOLIUM L. β. *filamentosum* Pers. Schlecht. Linnaea, 6. p. 34. — P. guayaquilense Steud. Synop. p. 85.

Status juvenilis, inde spiculis minoribus. Non differt a forma α (ad quam pertinet P. trichoides Sw. et P. trichopiptum Steud. Synops. p. 85.) nisi vaginis pilosis et paniculae ramis strictioribus.

Griesebach, Bonplandia 1858. p. 11.

Hab. in isthmo Panamensi.

13. PANICUM VAGINATUM Sw. β. *longipes* Lge. Naturhist. Forh. Vid. Meddel. 1854. p. 44. — Pugill. I. p. 28. — P. paspaloides Dub. var. Willk. Prodr. fl. hisp. I. p. 45.

Hab. ad littora arenosa et pinguia Oceani et sinum Gallaciae borealis frequens, olim verosimiliter aliunde introducta, sed nunc vere indigena facta, latus plagas occupans. (Aug. — Sept.).

14. PANICUM AEMULUM Steud. Synops. p. 44. n. 18. — *P. unguinosum* Banks et Soland. Mss. et Ic. — *Oplismenus aemulus* Kunth. Agrost. p. 142. Hook. fil. Fl. Nov. Zeland. p. 202.— *Orthopogon* R. Prodr.

Hab. in Nova Zelandia, Northern Island, in sylvis et umbrosis vulgaris.

18. PANICUM ANTIPODUM Spr. Steud. — *Isachne australis* Br. Hook fil. Fl. Nov. Zeland. p. 291.

Hab. in Nova Zeland. Northern Island, Bay of Island. *Cunningham* etc.; Auckland, *Sinclair*.

16. PANICUM HIRTICAULON Presl. (Reliq. Haenkeann. I. p. 308). Anders. l. c. p. 134. et 43. — Knth. Agr. p. 161.

variat: *majus;* culmo bipedali, subsimplici, pennae anserinae crassitie, f. latis, panicula ramosissima, ap. 2—4 uncias lata. — In insula Indefatigable. —

minus: culmo vix pedali a b. ramosissimo, tenui, f. vix semiunciam latis, vaginis multo densius et scabrius strigosis, panicula anguste contracta, subrara, spiculis laetius viridibus b. flavescentib.

Hab. in insula Chatham et Charles.

glabrescens: vaginis pilis tantum paucis derelictis glabriusculis, f. obscurius coloratis, spiculis (in duabus praecedentibus formis mox caducis) diutius persistentibus et paniculam densiorem efficientibus.

In ins. Chatham.

17. PANICUM MULTICULMUM Ands. En. pl. in ins. Galopag., in K. V. Acad. Handl. 1853 p. 133. et in Engenies Rese 1851—53 p. 43.

Culmis caespitosis, valde ramosis, ascendentib. pubescentibus; f. brevib., planiusculis, incano-villosis, vaginis subdilatatis: panicula oblga condensata, rhachi ramisque pilosis; spiculis ovatis acutiusculis; gluma inferiori brevi acuta, superiori flosculum aequante 7-nervosa; flosculo neutro bipaleaceo hermaphrodito osseo, paleis rugosis. —

Hab. ad scaturigines regionis mediae insulae Charles (Ipsè).

18. PANICUM FUSCUM Sw. (H. Ind. I. 145. Knth. Agr. p. 94). Anders. l. c. p. 135. et in Engenies Rese p. 44.

Sub triplici occurrit forma:

vegetius: pallide virens, culmo b. ascendente, diffuse ramosissimo 1—2 pedali; ramis paniculae pyramidalis angulatim divaricatis; spiculis pallide ferrugineis.

firmius: obscure viridis, culmo pedali rigido, ramis et foliis strictissimis; ramis paniculae elongatae subadpressis; spiculis fusco-sanguineis. —

pubescens; foliis vaginisq longe pilosis.

Hab. locis graminosis reg. inf. et mediae ins. Chatham et Charles. (Ipse).

19. PANICUM PARVUM (Sect. I. spicato-paniculata) Büse.

Büse in pl. Jungh. III. p. 373.

Paniculae ram. paucis, tenuib.; spiculis laxe sed subseriatim dispositis, inaequaliter pedicellatis, ellipticis, glabris, gluma infera lata membranacea, supera et glumella floris hebetati infera fertilem aequantib., bujus glumella infera apiculata rugulosa; f. linearib., glabris, margine scabris, vaginis margine tantum pilosis, culmo debili. —

Hab ins. Javae pr. Weltevreden v. d. Bosch in herb. clar. de Vriese. —

Affine P. prostrato et P. umbróso Retz.

20. PANICUM MYRIANTHUM (Sect. III. Paniculata) Büse.

Büse in pl. Jungh. III. p. 374.

Paniculae anguste ovalis elongatae rhachi ramisque hirsutis, ramis iterum sed brevius ramulosis, ramulis capillarib., spiculis ovoideis, gluma infera ovata spiculae ½ superante, supera spiculam aequante, floris neutrius glumella infera longa, supera brevi, floris fertilis glumell. laevib. nitidis, inferae figura ovata acuta, f. lanc. pag. superiore et vaginis parce pilosa, vaginis ore hispidiusculis. —

Hab. ins. Javae Zoll. no. 888 in herb. Acad. Lugd. Bat. Affine P. incompto Trin. —

21. PANICUM CAMPYLOGRAMMUM (sect. paniculata) Büse.

Büse in pl. Jungh. III. p. 375.

Paniculae ovato-pyramidatae ramis ramulisq. valde flexuosis pilis sparsis obsitis, spiculis ellipticis coloratis, gluma infera spiculae ½ superante, supera spiculam ae-

quante, fol. lanc. planis supra pilosis subt. mollit. pubescentib., vaginis amplis piloseliis, culmo ramoso hic illic piloso. —
Hab. in Sumatrae dumeta pr. Padang. (Jungh). Planta speciosa 10-ped. —

22. PANICUM PULIPES (Sect. IV.) Nees et W. Arn. mss. Büse.
Büse in pl. Jungh. III. p. 376.

Paniculae parvae rhomboidalis ramis paucis, alternis remotis, crassis, hic illic praesertim b. pilis sparsis obsitis; spiculis breve pedicellatis, coloratis, ambitu semi-rhombeis; gluma infera spiculae $^{2}/_{3}$, supera $^{3}/_{4}$ spiculae aequante; fl. neutrius glumella infera magna, fertilis glumellis nitidis laevissimis; foliis utrinq. subglabris, vaginis ore setosis; culmo rameso, b. prostrata radicante. —
Hab. ins. Javae silvas in sinu Wijnkoopsbaai. (Jungh.)

23. PANICNM JAVANUM (Sect. V.) Nees mss Büse.
Büse in pl. Jungh. III. p. 376.

Paniculae lanceolatae subcontractae ram. lgis., tenuib., scabris; spiculis modice pedicellatis, lanc., acutis; gluma inf. late ovata acuta, spicula vix $^{1}/_{3}$ aequante, supera ut ex neutrius floris glumella infera spiculam aequante, huj. glumella supera sub nulla, fl. fertilis glumellis parum induratis: f. lanc. e. b. cordata, glabrescentib., supremo paniculae basin cingente, vaginis ore setosis. —
Hab. ins. Javae pr. Welterreden et Buitenzorg. (Jungh.)
3—4 ped., etc.

β. *angustifolium*: f. linearib., caetera ut in specie. — Java pr. Pesewahan. (Jungh.)

24. PANICUM CORDATUM (Sectio VI.) Büse.
Büse in pl. Jungh. III. p. 376.

Paniculae contractae, defloratae vero divaricatae ramis non multis, spiculis lge. pedicellatis, ovalib. glabris; glumis subaequalib.; fl. sterilis glumella infera magna supera nulla; fl. fertilis glumellis nitidis, laevissimis, f. cordato-lanc., latis subglabris margine scabris atque ciliatis, vaginis parce setosis; culmo erecto, ramoso, geniculis prominulis.
Hab. ins. Javae pr. Pesawahan. (Jungh.)

25. PANICUM DICTYONEURUM Figari et de Notar. in Acad. Tor. 1854. tab. VIII. fig. 1—15.

Deest in speciminibus nostris Caryopsis et tota pars culmi a radice ad nodum superiorem, sed ex parte plantae superiore, a b. vaginae folii supremi nempe ad paniculae ap., quae decimetra 7 metitur, culmus orgyalem altitudinem in hac specie excedere facile eruitur. Species caeterum spectabilis et optime distincta, tum paniculae et locustarum amplitudine, tum valvula superiore inferiore angustiore ut palea inferiore flosculi masculi reticulata. —

Vide l. c. plantae descr. ampl.
In regione Kordofan Nubiae superior.

26. PANICUM JUBATUM Figari et de Notaris in Acad. Tor. 1854. tab. IX. fig. 1—15.

Valvulis paleisque structura ad P. dictyoneurum accedit, sed pluribus momentibus distinctissimum, ut vix cum ea comparari mereatur. —
Vide l. c. plantae descr. amplissimam.
In regione Kordofan Nubiae superioris.

27. PANICUM OLIGOTRICHUM Fig. et de Notaris in Acta Torin. 1854. p. 333. tab. X. 1—14.
In sect. quinta specier. generis Panici Agrostographiae synopticae celeb. Kunthii quae species paniculae ramis simplicibus, locustis spicatis v. racemose dispositis am-

plectitur; unicum P. prostratum (p. 89 n. 97.) c. nostro ni fallimur, comparandum venit ob paleam fl. hermaphroditi inferiorem mucronatam. Sed in P. prostrato culmi repentes prostrati, rhachides imberbes folia vaginaeque ciliatae, quae omnia speciem nostram a prostrato alienam declarare videntur. —

Vide l. c. desc. pl. amplissimam.
Ad amnem caeruleum in Nubia super.

28. PANICUM AMBIGUUM Fig. et Notaris Act. Tor. 1854. p. 336. tab. XI. 1—16.

Accedit valdopere P. obtusifolio, fluitanti paspalodi et brizoidi eorumque faciem refert. A P. paspalode, quod habemus ex Algeria misso a cl. Durieu, distinguitur prae reliquis valvula inferiore superiore ½ tantum breviore emarginata, flosculo hermaphr. striato. Ab obtusifolio differt quam maxime v. rhacheos structura v. gluma quae in obtusifolio flosculis multo brevior; a fluitante flore inferiore masculo 2-paleaceo nec 1-palaceo, nec neutro, a brizoide tandem recedere videtur racemis superne imbricatis, valvula inferiore rotundato-emarginata etc. — Vide l. c. pl. descr. amplam. —

In arvis et ad aggeres in Aegypto infer.

29. PANICUM COLONUM L.
Figari et de Notaris in mem. Act. Tor. 1854, p. 338. tab. XII. fig. 1—15.

P. tetrastichon Forsk.
Oplismenus colonus Knth. (I. 142).
Echinochloa colona Parl. pl. nov. p. 40.

In Aegypto inferiore nec non in Nubiae pluribus locis
Vide l. c. descript. pl. amplissimam. —

30. PANICUM CUSPIDATUM (Roxburgh.) Figari et de Notaris in Mem. d. Acad. Tor. 1854. p. 340. tab. XIII. 1—16.

Oplismenus cuspidatus (Knth. Agr. I. p. 147.).

Vide descript. amplam l. c.
In arvis Aegypti inferioris. Jan. et Feb.

30a. PANICUM CRUS GALLI L. Sp.
Figari et de Notaris in mem. d. Acad. Tor. 1854. p. 341.

Oplismenus Crus Galli α. β. Kunth. Agr. I. p. 143. (exclusivo P. Zonali Guss.).

Vide l. c. descr. varietatum.
Hab. in locis inundatis Aegypti infer. et in Nubia. —

30b PANICUM NUMIDIANUM Desf. (Knth. Agr. I. 92.)
Figari et de Not. in M. d. Acad. Tor. 1854. p. 342. tab. XIV. f. 1—14.

Vide l. c descr. amplam.
Ad fossas et lacum oras in Aegypto infer.

31. PANICUM INCOMPTUM Figari et de Notaris. Acad. Tor. 1854. p. 344. tab. XV. fig. 1—13.

Vide l. c. descr. amplam.
In Nubia super. ad flumen coeruleum.

32. PANICUM FATUUM Figari et de Notaris Acad. Tor. 1854. p. 346. tab. XIV. f. 1—10.

V. l. c. descr. amplam.
In Nubia superiore ad fl. coeruleum.

33. PANICUM SERRARIUM Figari et de Not. Acad. Tor. 1854. p. 347. t. XVII. figura 1—14.
Vide l. c. descr. amplam.
In Nubia superiore ad fl. coeruleum.

34. PANICUM KOTSCHYANUM Hochst. in pl. sicc. Un. Itin. — Figari et de Notaris Acad. Tor. 1854. p. 348. tab. XVIII. fig. 1—15.
Vide l. c. descr. amplissimam.
In Nubia superiore ad fl. coeruleum.

35. PANICUM MINUTIFLORUM Figari et de Not. Acad. Tor. 1854. p. 330. tab. XIX. fig. 1—15.
Vide l. c. descr. amplissimam.
Ad amnem coeruleum in Nubia superiore.

36. PANICUM DELICATULUM Figari et de Notaris Acad. Tor. 1854. p. 381. tab. XX. fig. 1—13.
Vide l. c. descr. amplam.
In Nubia superiore ad fl. coeruleum.

37 PANICUM NUBICUM Figari et Not. Acad. Tor. 1854. p. 352. tab XXI. f. 1—12.
Vide l. c. descr. ampl.
In Nubiae superioris regione Kordofan.

38. PANICUM TURGIDUM Forsk. (Knth. Agr. I. p. 97). Figari et Notaris in M. d. Acad. Tor. 1854. p. 354.
In desertis pr. Cahirum et ad Suez frequens.

39. PANICUM MILIACEUM L. Knth. (Agr. I. 104. II. p. 81.) Figari et Notaris l. c. p. 354.
In cultis Aegypti infer. hinc inde, praeprimis circa Kahirum.

40. PANICUM COLORATUM L. Mant. p. 30; Jacq. Ic. I. t. 12. Figari et de Notaris l. c. p. 355.
In valle Nili inferiore ad Syont, Kahirum etc. abunde,

41. PANICUM RETICULATUM Torr. bot. of the explor. of the Red River of Louisiana (1852). p. 299.

42. PANICUM OBTUSIFOLIUM Delile var. *acutifolium* Explorat. scient. de l'Algérie phan, p. 29.

DIGITARIA Scop.

(Panici sect. Endl. gn. pl. n. 770. — Walp. Ann. III. 714.)

1. DIGITARIA CILIARIS Koel. Pers. (Kunth. Agr. p. 82. n. 43). Büse in pl. Jungh. III. p. 380.
Planta variabilis. In normali gluma inf. minuta supera ½ spiculam haud aequens.
variat: β. *spicis subternis*, gluma inf. subnulla, supera spiculae ¼ aequante.
γ. *spicis subbinis*, gluma infera subnulla, supera spiculae ½ aequante.
δ. *spicis plurimis*, gluma supera dimidiam spiculam aequante aut et superante.
Hab. ins. Sumatrae pr. Padang (Jungh.)

2. DIGITARIA PES AVIS Büse in pl. Jungh. III. p. 380.
Ramis paniculae subtridigitatis, longis, divergentibus; spiculis ovato-lanc., gluma infera minuta deltoidea, supera spiculam dimidiam longa, pilosa; glumellae fl. neutrius nervis omnibus sub lente pilosellis; fol. lanc., glabris, b. ut et vaginarum ore pilis raris praelongis praeditis.
Hab. ins. Javae. Jungh. (pl. spithamaea).

3. DIGITARIA DIGITATA Büse in pl. Jungh. p. 381.
Ramis paniculae subquinis, strictis, approximatis; spiculis ovalib.; gluma infera nulla, supera pilis longis simplicib. hirsuta, ut et glumella bebetata membranaceo-marginata, spiculam subaequante; f. vaginisque glabris, culmo stricto. —
Hab. ins. Javae pr. Pesawahan (Jungh.)
Habitus macilentus; bipedalis etc.

4. DIGITARIA ROPALOTRICHA Büse in Jungh. III. 381.
Ramis paniculae subseptenis approximatis; spiculis ovalib., gluma infera subnulla, supera spiculae $^2/_3$ longa, aeque ac neutrius glumella pilis clavatis dense obsita, nervis glumellae neutrius aequidistantibus marginalib. crassis, rhachi pedicellisque hic illic setigeris, fol. glabris, vaginis ore parce pilosis, culmo erecto.
Hab. insulam Javae pr. Pesawahan (Jungh.)
Planta inter Digitarias speciosa, 2—3 ped. etc.

β. *glabrescens*: rhachi glabra, gluma superiore longiore.
Hab. ins. Javae sinum Wynkoopsbaai pr. Magelang. (Jungh.)

5. DIGITARIA PERTENUIS Büse l. c. p. 381.
Ramis paniculae subternis, alternis, strictis; rhachi tenui; spiculis ovalib., omnib. pedicellatis; gluma infera brevi amplectente, supera et neutrius glumella subaequalib. spiculam longis, nervis glabris, interstitiis pilis longiusculis obsitis, f. vaginisque longe pilosis, radice repente.
Hab. Sumatrae ins. pr. Padang. (Jungh.)
Planta pusilla.

6. DIGITARIA PSEUDO-ISCHAEMUM Büse in pl. Jungh. III. p. 382.
Paniculae ramis subbinis (?) latis, spiculis ovato-lanc., gluma infera minima scariosa, supera lanc. trinervia, flor. neutrius glumella infera 7-costata, ambab. floris fertilis glumellas laeves aequantib.; f. distichis, crassis, late lanceolatis, glabris, marg. scabriusculis; ligula magna; vaginis glabris; culmo prostrato, nodis barbatis.
Habit. in Sumatrae littoralib. arenosis. (Jungh.)

7. DIGITARIA UROCHLOIDES Büse in pl. Jungh. III. p. 382.
Paniculae ram. paucis, longe remotis, elongatis, tenuib.; ramul. multis, alternis, aeq. remotis sed brevib., spicaeformib., spiculas 5—6 aequaliter pedicellatas subdistichas gerentib.; gluma infera spiculae $^1/_2$, supera $^2/_3$ longa, ambabus pilosellis, uti et fl. neutrius glumella solitaria, fl. fertilis glumella infera ciliata ap. hispidula; fol. cordato-lanceolatis vaginisque setosis, his dense ciliatis, culmo b. procumbente, radicante.
Hab. ins. Javae pr. Weltevreden, (Jungh.)
Planta elegantula, habitu Echinochlaenae cujusdam, etc.

8. DIGITARIA PRURIENS Büse (Knth. Agr. p. 83. no. 50.)
variat: β. gluma supera spiculae $^1/_4$ aequante.
In Sumatra, prov. Angkola sup. (Jungh.)

γ. *Arnottiana*; gluma supera dimid. spiculam subaequante. — Panicum Arnottianum Nees et W. Arn. Mss.
Hab. ins. Javae pr. Tjibogo. (Jungh.)

9. DIGITARIA PSEUDO-DURVA Nees? v. Schlechtend. in Linn. XXVI. p. 458.
Cfr. pl. description. l. c.

10. DIGITARIA (Panici sp. Knth.) VESTITA Figari et de Notaris Acad. Tor. 1854. p. 356. tab. XXII. f. 1—15.
Vide l. c. descr. amplissimam.
Ad Fazogl in Nubia superiore.

11. DIGITARIA VARIABILIS Figari et de Notaris Acad. Tor. l. c. p. 357. tab. XXIII. fig. 1—15.
Vide l. c. descr. amplissimam.
In Nubiae superioris regione Kordofan et Fazogl.

12. DIGITARIA DECIPIENS Figari et de Notaris Tor. Acad. l. c. p. 359. tab. XXIV. fig. l. c. 1—16. Vide descr. amplissimam.
In Nubiae superioris regione Kordofan.

13. DIGITARIA AEGYPTIACA Willd.
Panicum Aegyptiacum Retz (Knth Agr. I. 83.)
Vide l. c. descr. amplam.
In arvis inferioris Aegypti.

14. DIGITARIA CILIARIS Willd.
Panicum ciliare Retz (Knth. Agr. I. 82.)
Figari et de Notaris in Mem. d. Acad. de Tor. 1854. p. 362. tab. XXVI. Fig. 1—14.
Vide l. c. descr. amplam.
In Aegypto inferiore.

15. DIGITARIA CHRYSOBLEPHARA Figari et Notaris in Mem. d. Acad. d. Tor. 1854. p 364. tab. XXVII. fig. 1—13.
Vide l. c. descr. amplam.
Digitariae ciliaris aemula, sed ab ea optime distincta f. vaginisque, setulis baseos foliorum exceptis, glabris, palea neutra et valvula superiore longe barbatis, setulis dorsalibus paleae ipsius aureo-nitentibus, locustis angustioribus.

773. ISACHNE R. Br.
(Walp. Ann. III. 720.)

1. ISACHNE MONTICOLA Büse pl. Jungh. III. p. 379.
Paniculae patentis paucirameae ramis crassis, planiusculis, glabrescentibus; spiculis ovalib.; glumis oblongo-ovatis, glabris, intervallo insertionum conspicuo; flor. subaequalibus, pubescentib., superiore conspicue pedicellato; f. ovato-lanceolatis, distichis, ciliatis, vaginis longe pilosis.
Hab. insulae Javae in monte Mandalavangi. (Jungh.) Pusilla, culmus prostratus etc.

2. ISACHNE FIRMULA Büse in pl. Jungh III. 379.
Ramis ramulisque paniculae contractae crassis, planiusculis, flexuosis; spiculis late ovalib., hirtis; glumis ovatis acutis; flor. subaequalibus, pedicello superioris perbrevi; fol. lanceolatis, asperis; b. rigide setosis, margine denticulatis; junioribus pilosis; vaginis ciliatis, caeterum glabris.
Hab. ins. Javae in monte Ungaran alt 4000' et in m. Kawi (Jungh.).

β. *marginata* Büse; valde hirsuta, f. marginatis. — Hab. ins. Javae (Jungh.)

778. OPLISMENUS Palis*).
(Walp. Ann. III. 720.)

1. OPLISMENUS CRUS GALLI Kunth. en. I. p. 143. — Explorat. scient. phaner. p. 27.
Var. α. *vulgare*: Spicis subcompositis; spicular. nervis hispidis; glumella inferiore floris neutri longe aristata, rarius mucronato-aristata, rhachi generali ad angulos scabra, rarius laeviuscula. In orbe fere toto: Europa, Asia, Africa, America, Nova Hollandia.

Var. β. *colonus*: F. saepe rubro-zonatis, spicis simplicibus; spiculis saepius minoribus, scabris, rarius ad nervos hispidis; glumella inferiore floris neutri acuminata

*) Confer supra Panicum L.

submutica; rhachi generali ad angulos laevi v. laevinscula ap. tantum scabra, pilis paucis ad spicar. inferiorum insertionem, in superiorib. v. in omnibus non raro nullis.

Oplismenus colonus Humb. et K

Habitat in humentib. cultis caet. Constantine, Oran.

ORTHOPOGON R. Br.

(Endl. gen. pl. n. 778. (Oplismeni subg. Knth. sub Oplismenus).

1. ORTHOPOGON COMPOSITUS R. Br. (Knth. Agr. p. 141. n. 18.) Büse in pl. Jungh. III. p. 370.

β. *glabrescens*; fol. vaginisque et rachi vix pilosis. —

Habit. ins. Javae m. Merapi alt 5—5000'. (Jungh.)

2. ORTHOPOGON BURMANNI R. Br. (Knth. Agr. p. 139. n. 5.) Büse in pl. Jungh. III. p. 370.

β *lanatus* Büse; spicis brevioribus, glumis lanatis. —

Hab. ins. Javae ad truncos Cocos nuciferae pr. Projugan (Jungh.)

781/a. SETARIA Pallis*).

(Walp. Ann. III. p. 721.)

1. SETARIA GLAUCA Beauv. (Knth. Agr. p. 149) Büse in pl. Jungh. III. p. 368.

Ab hac notissima lateque divagante specie vix seperare audeo stirpes Indicas, quae vero c. aliis partib. satis discrepant, mihi hucusque sunt subspecies:

2. SETARIA (GLAUCA) SUBTESSELATA Büse l. c.

Spiculis ellipticis gluma superiore dimid. spiculam non aequante, glumella fl. fertilis externa transverse rugosa atque tenue longitudinaliter striata.

α. *normalis*; involucris (i. e. pedicellis sterilib.) spicula bis terve longioribus, post anthesin patentibus.

In ins. Java et Sumatra vulgaris (Jungh.)

β. *ictura*; involucris spicula bis terve longiorib., in spica effoeta contractis. Java et Sumatra (Jungh.)

γ. *breviseta*; involucris spiculam parvam paulum superantib., fol. longiorib. Java pr. Wijnkoopsbaai (Jungh.)

3. SETARIA FLORIANA And. En. pl. ins. Galopag. p. 139. et in Eugenies Resa p. 46.

Spica brevi cylindracea obtusiuscula subflexuosa, flavide rufescente, involucro 1-laterali, setis spiculam quadruplo superantibus, scabris.

Hab. locis graminosis in cacumine ipse summi montis insulae Charles (Ipse.) Itaque vix c. cerealibus adportata. — Habet spiculas quam in S. glauca, quacum habitu exteriori quodammodo congruit, multo minores, setasque quam in S. imberbi scabriores.

781/b. GYMNOTHRIX Palis.

(Walp. Ann. III. 722.)

1. GYMNOTHRIX ELEGANS Büse in pl. Jungh. III. p. 368.

Panicula contracta, spicaeformi, deniq. cernua; spicul. lanc., pedicellatis; glumis acute lanc., infera spiculae $1/3$, supera spiculae $3/4$

*) Confer supra Panicum L.

aequante, pilis involucelli scabris albo-sericeis; f. lanceolatis, glabris, margine levit. asperis; culmo sulcato.

Sericura elegans Hassk. in Cat. hort. Bog. et in Tijdschr. v. Nat.-Gesch. X. p. 116.

Hab. in Javam. (Jungh.)

Gram. speciosum, habitu G. macrostachyae Brogn. admodum simile, attamen plane diversum.

2. GYMNOTHRIX CHILENSIS Em. Desv. Gram. Chil. in Gay Flora chil. t. VI. p. 251. t. 74. — 1853.

G. erecta, pallida, bi—tripedalis, culmo tereti, laevi, ad nodos imberbi; vaginis junioribus pilosis; ligula brevi, dense pilosa; fol. complicatis, intus et ad margines scabris; spica cylindracea, 3—6-pollicari; spiculis solitariis, subsessilibus, pallidis, involucro multiseto duplo minoribus, lanceolatis; glumis minimis, rotundatis; floribus subaequalibus; masculo 2-paleaceo; palea inferiore 5-nervia; nervo intermedio minus conspicuo vel nullo, hermaphroditi palea inferiore lanceolato-subulata, 5-nervia, stylis ultra medium connatis, pilis purpurascentibus. — Hab. in Chile.

BECKEROPSIS.

Figari et de Notaris in Mem. d. Acad. Tor. 1854. p. 365. — Beckera Nees, non Fresen.

Locustae simpliciter racemosae, 2-florae, seta solitaria simplici e pedicelli ap. oriunda involucratae. Flosculi longitudine subaequales, inferior neuter unipaleaceus, superior 2-paleaceus hermaphroditus. Gluma 2-valvis, minima, capsulae ad instar flosculos amplectens. Valvulae inaeq., membranaceae, truncatae, enerves; inferior minor. Palea flosculi neutri et palea inferior flosc. hermaphroditi subchartaceae, concaviusculae, marg. inflexae, semiamplectentes, 3-nerviae, muticae. Palea superior fl. hermaphroditi membranacea, truncata, 2-nervis, utrinque inflexa. Paleolae nullae. Stam. 3. Antherae oblongae. Ovarium distylum. Stigm. plumosa c. stylorum ap. articulata. Caryopsis paleis perdurantibus involucrata.

Herbae elatae caet. — Genus accedens Setariae et Gymnothrici, ab utraque diff. involucro locustarum uniseto, gluma cupulaeformi. Cum Beckeris Fresenianis vix nisi habitu et glumae cupuliformis forma comparandum.

1. BECKEROPSIS NUBICA Hochst. in pl. exs. un. itin. — Figari et de Notaris in Mem. d. Acad. di Torino 1854. p. 366. t. XXVIII. f. 1—11.

Vide l. c. descr. amplam.

In Nubia superiore. Colitur interd. in hortis Kahirinis, ubi mensib. Oct. et Nov. floret.

2. BECKEROPSIS PETIOLARIS Hochst. in pl. exsicc. un. itin. — Figar. et de Notar. l. c. p. 368.

Hujusce speciei parvum habemus specimen a cl. Reichenbachio juniore missum. Differt a B. Nubica omissis characteribus folior. inferior. et divisionis culmi, seta involucrante, locustis vix quadruplo longiore.

In Nubia legit Kotschy.

781/c. PENNISETUM Palis*).

(Walp. Ann. III. p. 725).

1. PENNISETUM TIBERIADIS Boiss. diagn. XIII. p. 43.

P. perenne caespitosum, radicis fibris robustis duris, culmis robustis simplicibus erectis vel ascendentibus elatis basi vaginatis foliosis superne sub spica striatis sca-

*) Cfr. supra Panicum L.

bris, foliis glauco-virentibus duris rigidis anguste linearibus scabris siccis canaliculatis, vaginis non inflatis ore ciliatis, ligula ad cilia reducta, spicis terminalibus longis crassis densis albidis vel rubellis cylindricis, spiculis in involucro solitariis involucri substipitati setis rubellis flosculo duplo longioribus inferne plumosis intima aliis duplo longiori crassiorique, glumis oblongis hyalinis albis glabris inferiori subtriplo majori trinervi acuminata superiori uninervi acuta, flosculo neutro nullo vel ejus loco squamula lineari, flosculi hermaphroditi glumellis vix coriaceis virescentibus aequilongis glumam majorem subsuperantibus oblongis acuminatis inferiori quinquenervi superiorem trinerviam involventi, stigmatibus plumosis rufescentibus longe exsertis.

Hab. in rupestribus calidis Galileae, in rupibus prope Tiberiadem, prope Khan-Hussein ad littora lacus Genesareth et ad Banias. Legi ineunte Maio.

Culmi $1^1/_2$—2-pedales, spica 5—6-pollicaris, involucri seta major pollicem longa. Pulcherrima species a P. orientali Rich. (cui P. fasciculatum et P. Sinaicum ut synonyma adnumeranda sunt), P. rufescenti et aliis spicis longissimis densis longissime setosis distinctissima, propius accedens ad P. macrostachyum Abyssinicum quod foliis setaceo-convolutis, spica minus densa, spiculis geminatis etc. egregie distinguitur.

2. PENNISETUM PERSICUM Boiss. et Reut. (in N. Mem. de la Soc. d. Natur. de Mosc. XII. p. 232).

Culmo basi indurato ramoso elato ad nodos hirsuto ceterum glabro; foliis glaucescentibus anguste linearibus strictis facie superiori striatis scabris, vagina et ore hirsutis, racemo laxiusculo subsecundo basi saepius folio saepissime setaceo suffulto, rachide villosa, spiculis 2—3 fasciculatis subsessilibus, basi involucro setoso suffultis setis inaequalibus ad medium usque plumosis longioribus spiculas superantibus, glumis inaequalibus superiori longiori apice acuminata flosculo subbreviori glumellis acuminatis.

Hab. prope Dachendak, Jesder mont. prope Tatt et Muswor. Apr. Maj. 1819.

3. PENNISETUM ASPERIFOLIUM Kth.-Steud. Synops. p. 108. Coss. et Kralik Bullet. de la Soc. bot. de France 1857. p. 496. — *Cenchrus asperifolius* Desf. — *P. Tiberiadis* Boiss. Diagn. pl. scient. XIII. p. 43. (Conf. supra n. 1.)

Hab. etiam in regno Tunitano, in Algeria, in Syria.

4. PENNISETUM CILIARE Link. — Explor. scient. de l'Algerie phan. p. 38.
P. cenchroides Knth. en. I. 162. Parl.!

5. PENNISETUM DICHOTOMUM Del. (Knth. Agr. I. p. 161). Figari et de Not. l. c. p. 369.
Vide descr l. c.
In desertis Aegypti inferioris secus maris rubri oram.

781/d. AMPHOCHAETA Ands. (nov. gen.)

En. pl. ins. Galopag. in V. Akad. Handl. 1853. p. 136. et in Eugenies Rese 1851—1853. p. 45.

Spiculae biflorae, setis subinvolucratae; flosculi mutici, inferior masculus vel neuter 1-paleaceus, superior bipaleaceus. Involucrum diciduum e setis 2—4, ad utrumque latus spiculae collectis constans. Glumae 2-hyalinae inaequales muticae convexae. Paleae flosculi hermaphroditi membranaceae, convexae, exterior apiculata, interior superiorem margine amplectens. Lodiculae minutae concavae truncatae, cuneiformes. Stamina 3, antheris rufescentibus, filamentis brevissimis. Ovarium glabrum, styli elongati, stigmata obscure purpurea, pilis simplicibus penicellata.

Genus a Setariis distinctissimum ob setas involucrales in fasciculos duos spiculis collaterales divulsas cum spicula ipsa deciduas, et paniculam e ramis elongatis axillaribus racemosam. Habitu externo cum Setaria dioica (quae forsan etiam e Setariis

WALPERS.

ANNALES BOTANICES

SYSTEMATICAE.

TOMI SEXTI

FASC. VII.

AUCTORE

DR. CAROLO MUELLER BEROL.

LIPSIAE.

SUMPTIBUS AMBROSII ABEL.

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ceteris removenda 1) congruit, sed differt aperte involucris et spiculis. — Ab ill. Nees ad genus Gymnothrix a Steudel ad Pennisetum relatum ab utroque aperte differt.

1. AMPHOCHAETA EXALTATA And. l. c.

Culmo rigido erecto elato, foliis convoluto-filiformibus; spicis axillaribus strictis rigidis; spiculis lanceolato-acutis, albido-viridibus.

Gymnothrix paupera Nees Mss.

Pennisetum pauperum Steud. Syn. II. 102.

Hab. inter lapides vulcanicos locis editioribus ins. Albemarle (Ipse). Caespites magnos et elevatos format, caet.

782. PENICILLARIA Swartz.

(Kth. ex I. 1. p. 165. et I. 2. p. 120.)

Penicillariae species novae auctore *A. Braun*, ind. sem. h. Berol. 1855.

Illustrissimus comes Schlieffen a Schlieffenstein ex itinere Africano redux Julio anni 1854 grana frumenti cujusdam in regno Cordofano sub nomine „Dogghe" („*Doche*" sec. Ehrenb.) culti benigne mihi communicavit, e quibus autumno ejusdem anni in horto botanico satis et plantulis novellis per hiemem in caldario servatis aestate insequente sub diu plantae speciosae, latifoliae prodierunt habitu cum Penicillaria spicata, antiquitus in hortis culta, convenientes, sed, id quod accuratius examen probavit, non solum ab omnibus Penicillariis hucusque cognitis, sed etiam inter se quoad speciem aut varietatem saltem distinctae.

Penicillariae genus a Willdenowio a. 1809 conditum, in Steudelii opere novissimo iterum Penniseto subjunctum est, a quo antherarum loculis apice penicillatis et stylis connatis satis differt. Aeque ac alia plantarum cerealium genera species et varietates numerosas, haud facile distinguendas amplectitur, quarum plures jam veteribus cognitae auctorum recentiorum confusione maxima intricatae sunt, id quod cl. Schlechtendal in Linnaeae volumine XXV. (1852) p. 530. exposuit. Species nonnullas novas cl. Figari et De Notaris in Agrostographiae aegyptiacae fragmentis (1853) exposuerunt, aliae ineditae, nec non varietates complures novae e Nubia, Senegambia et regno Mossambicensi in herbario reg. Berolinensi asservantur.

1. PENNICILLARIA CORDOFANA A. Braun et Bouché l. c.

Foliis nudis; spica oblongo-cylindracea; involucris brevissime pedunculatis, dense sursum imbricatis demum patentissimis, plerumque unispiculatis, setis spiculas subaequantibus vel paulo superantibus, una reliquis longiore spiculam longius superante interioribus laxe plumosis; spiculis oblongis, bifloris (rarissime unifloris); glumis spathaceis (prima et secunda) minimis, longitudine subaequalibus, hyalinis, enerviis, subdenticulatis; gluma tertia spicula ⅙—¼ breviore, oblonga, obtusa, evidenter mucronata, 3—5-nervi, glumellam longiorem et florem masculum amplectente; gluma quarta breviter subulato-acuminata, 5—6-nervi, prope marginem tenuissime et brevissime piloso-ciliata, glumellam paulo breviorem nudam et florem hermaphroditum amplectente. Culmus 4' circiter altus, nodis subbarbatis. Foliorum vagina laminaque nuda; lamina utrinque scabra 8—10 lata, caet.

In regno Cordofano colitur sub nomine „Dogghe".

Huic formae sequentes proxime accedunt, quas omnes, praesertim glumarum forma longitudine relativa et nervatura aliisque notis distinguendas, ad interim nominibus propriis specierum loco propono, quamvis ad typos specificos pauciores demum revocandas esse persuasum mihi est.

2. PENICILLARIA NUBICA A. Br. l. c.

Spica cylindrica, densissima; involucris breviter pedunculatis (pedunculis involucro dimidio brevioribus, ubique villosis), patentissimis, infimis demum reflexis, bispiculatis, setis spiculas subaequantibus, una (vel binis) longiore; spiculis aut bifloris, aut unifloris; glumis spathaceis minimis hyalinis enerviis (prima in spiculis unifloris fere deficiente); gluma tertia aut florem masculum fovente eaque spicula $^1/_4$ — $^1/_5$ breviore, 3(—4)-nervi, emarginata, vix mucronulata, glumellam longiorem dorso ciliatam amplectente; aut sterili spicula $^2/_5$ — $^3/_4$ breviore, truncato-emarginata, ciliolata, tenuissime 1—3-nervi; gluma quarta 5—6-nervi, versus marginem evidentius pilosa. (Nodi barbati; vaginae verrucis setigeris minimis parce obsitae; spicae 3" circiter longae, $^1/_2$" crassae; caryopsis matura e glumis emergens, magis pyriformis et crassior quam in forma cordofana, colore in coeruleum vergente. Spiculae uniflorae praesertim in spicis serotinis ramorum obviae.)

In Nubia cultam legit cl. Ehrenberg.

3. PENICILLARIA ARABICA A. Br. l. c.

Spica elongata, cylindrica, densissima; involucris breviter pedunculatis (pedunculis ut in praecedente) 1—2-spiculatis, setis spiculas subaequantibus, una reliquis vix longiore; spiculis minoribus et obtusioribus, omnibus unifloris; gluma prima fere deficiente; secunda minima, enervi; tertia (sterili) spicula $^3/_4$ — $^4/_5$ breviore, emarginato-truncata, ciliolata, hyalina, tenuissime 1—3-nervi, gluma quarta apice attenuata, vix acuminata, 5-nervi, versus marginem pilosiuscula.

Colitur in Arabia felici (herb. Nees ab E.)

P. cordofana et nubica glumella floris masculi glumam superante conveniunt, nec nisi notis inferioris momenti differunt. P. arabica, in qua spiculas unifloras tantum inveni, his certo intime juncta est, id quod spiculis bifloris demum repertis probandum erit. Hae tres sine dubio conjunctum typum specificum proprium repraesentant, P. Doche salutandum.

4. PENICILLARIA COMPACTA Al. Br. et Bouché l. c.

Spica oblongo-cylindracea, crassa, densissima; involucris breviter pedunculatis (pedunculis ut in praecedente), patentissimis, bi- (rarissime tri-) spiculatis, setis spiculas vix aequantibus (seta eminente nulla); spiculis bifloris (rarissime unifloris): gluma prima minima, hyalina, enervi; secunda spicula $^4/_5$—$^2/_3$ breviore, truncata, obtusa vel acuta, hyalina, 1—3-nervi; tertia spicula $^1/_6$ breviore, obtusa, mucronata, 5-(rarius 3—4-, vel 6-)nervi, glumellam paululum breviorem dorso piloso-ciliatam et florem masculum amplectente (rarissime sterili, spicula $^2/_5$ breviore, trinervi); quarta breviter subulato-acuminata, 5-nervi, prope marginem piloso-ciliata. (Nodi barbati, vaginae nudae, folia sparse pilosa, spica $3^1/_2$" longa, ultra $^1/_2$" crassa).

In Nubia cum P. nubica cultam legit cel. Ehrenberg.

P. nubicae simillima, sed praeter spicam crassiorem et defectum setarum involucri eminentium gluma floris masculi glumellam paululum superante et gluma secunda magis evoluta, nervis tenuissimis 1—3 percursa essentialiter differt. Nihilominus ad typum Penicillariae Doche pertinere videtur.

5. PENICILLARIA SPECIOSA A. Br. et Bouché l. c.

Spica majore et laxiore, cylindraceo-elongata; involucris breviter pedunculatis (pedunculis ut in praecedentibus, nonnunquam longioribus spiculas subaequantibus, nec non longius pilosis), erecto-patentibus, 2- rarissime 1- vel 3-) spiculatis, setis spiculas aequantibus, una reliquis longiore; spiculis bifloris (rarissime unifloris); gluma prima fere deficiente; secunda brevissima, truncata, hyalina, enervi; tertia spicula $^1/_5$ — $^1/_4$ breviore, obtusa, validius mucronata, 5—7-nervi, glumellam subaequilongam dorso ciliatam et florem masculum amplectente, (rarissime sterili, spicula $^1/_3$ breviore, 1—3-nervi); quarta longius acuminata, 7-nervi, laxe pilosa. (Nodi barbati; vaginae parce verrucoso-setulosae; folia latissima, ultra pollicem (ad 15‴) lata; spica 5—6" longa, $^1/_2$" et ultra crassa.)

In Nubia cum P. nubica et compacta cultam legit cel. Ehrenberg.

Forma spicae magnitudine et foliorum latitudine insignis a praecedente praeter spicam laxiorem praesertim nervorum glumae tertiae et quartae numero diversa.

6. PENICILLARIA VULPINA A. Br. et B. l. c.

Spica subcylindracea, versus apicem sensim attenuata, minus stricta; involucris brevissime pedunculatis (pedunculis quartam spicularum partem aequantibus, pilosis), erecto-patentibus, unispiculatis (rarius bispiculatis), setis spicula sesqui-, nonnullis duplo longioribus; spiculis bifloris, rarius unifloris; gluma prima fere deficiente, secunda brevissima, hyalina, enervi (rarissime magis elongata et nervi rudimento instructa); gluma tertia aut florem masculum fovente eaque spicula $^1/_6$ breviore, obtusa, mucronulata, 6—7-nervi, glumellam aequilongam apice anguste productam dorso ciliatam amplectente; aut sterili spicula $^2/_3$ breviore, mucronulata, trinervi; quarta longius acuminata, 6—7-nervi, versus marginem pilosa. (Nodi pilosi; vaginae verruci setulisque crebrioribus obsitae; lamina foliorum utrinque setuloso-pilosa; antherarum loculi apice ut in reliquis penicillati, basi longius apiculati; caryopsis minor glumis immersa).

In consortio praecedentium in Nubia cultam l. cel. Ehrenberg.

Spicarum habitu peculiari, subflexuoso, propter setas longiores magis pennisetoideo, nec non colore violascente vel ferrugineo-rufescente a praecedentibus magis discrepat, sed glumarum forma et nervatione cum P. speciosa omnino fere convenit. Glumella floris masculi et hermaphroditi in apicem abrupte angustatam longius producta, ut in sequente, quacum typum specificum proprium, cui nomen P. typhoideae reservari posset, sistere videtur.

7. PENICILLARIA PLUKENETII Al. Braun et Bouché l. c.

Spica subcylindrica, stricta; involucris brevissime pedunculatis (pedunculis ut in praecedente), erecto-patentibus vel demum patentissimis et inferioribus subreflexis, 1—2-spiculatis, setis spiculas subaequantibus vel vix superantibus, seta una reliquis nonnunquam longiore; spiculis aut bifloris aut unifloris, angustioribus; gluma prima minima aut fere deficiente; secunda brevissima, dilatata, hyalina, enervi; gluma tertia aut florem masculum fovente, spicula $^1/_4$—$^1/_3$ breviore, oblongo-lanceolata, obtusa vel late emarginata, mucronulata, 3- (rarius 5-) nervi, glumellam aequilongam apice anguste productam dorso vix ciliatam amplectente; aut sterili spicula $^1/_4$—$^1/_3$ breviore, ovata, apiculata, trinervi; gluma quarta sensim acuminata, 7—9-nervi (rarissime 5-nervi), versus marginem parce et brevissime pilosiuscula. (Praecedentibus minus robusta; vaginae tuberculis crebris setiferis obsitae, nec non foliorum lamina setoso-pilosa; spica Alopecuri spicam aemulans, $1^1/_2$—3'' longa, pollicem dimidium fere lata, versus apicem vix attenuata; glumella floris hermaphroditi dorso papillosa.)

In Aegypto, ubi „Doche" appellatur sec. Ehrenb.

A praecedente praesertim differt involucri setis brevioribus et nervatura glumae tertiae; caeterum valde variat. In herb. reg. adsunt: a) *forma major* spica elongata densa, spiculis inferioribus subreflexis, omnibus bifloris (in insulis incultis petrosis prone Suan lecta a cl. Ehrenberg); b) *forma media*, spiculis erectis, plerisque bifloris (prope Syene lecta a cl. Sieber); c) *forma depauperata*, spica acutiore magis rufescente, spiculis erectis omnibus unifloris (cum praecedente a Siebero lecta); d) *forma hortensis* vaginis foliisque nudis, involucris unispiculatis, spiculis unifloris, gluma quarta 5-nervi (ex horto Berolinensi). Ad formam a) pertinere videtur *Pennisetum typhoideum* Del. Fl. de l'Eg. t. 8; forma b) et c) *Penicillariam Sieberianam* Schlechtd. Linnaea XXV. (1852.) p. 565. sistunt; forma d) vera est *P. Plukenetii* Link. Hort. Berol. I. (1827.) p. 221. in hortis cum Penicillariae spicatae forma angustiore saepe confusa. *P. Plukenetii* Jacq. Ecl. Gram. t. 47. (sine descriptione edita) habitu convenit, sed ex icone pedunculis longioribus et glumella floris masculi glumam superante differt. Ad typum P. typhoideae porro pertinere videntur species sequentes a cl. Figari et De Notaris propositae:

8. PENICILLARIA FALLAX Fig. et De Not. Agrost. aegypt. fragm. II. p. 55. Acta Tor. 1854 p. 371 t. 29 f. 1—12. in Nubia superiore ad flumen album lecta, quae secundum iconem et descriptionem autorum spiculis partim unifloris, partim bifloris aliisque notis cum P. Plukenetii convenit, sed gluma tertia in spiculis bifloris quartam aequante, in unifloris spicula dimidio longiore anguste lanceolata uninervi differt. — A. Braun. l. c.

9. PENICILLARIA RADDIANA Fig. et De Not. ib. p. 57. in Aegypto a Raddio lecta, plerisque notis, praesertim spiculis omnibus bifloris et gluma floris masculi emarginata cum formis majoribus P. Plukenetii convenire, nec nisi gluma secunda rudimento nervi instructa differre videtur. A. Br. et Bouché l. c. — His denique accedit forma e seminibus Cordofanis culta secunda:

10. PENICILLARIA SOCIA A. Braun et Bouché l. c. Foliis nudis; spica cylindracea; involucris brevissime pedunculatis, sursum imbricatis, plerumque bispiculatis, setis interioribus spiculas paulo superantibus laxe et parce plumosis; spiculis lanceolatis, sensim acuminatis; glumis spathaceis angustis, prima brevissima hyalina enervi, secunda paulo longiore hyalina 1-3-nervi; gluma tertia spiculam dimidiam superante, 3-nervi, glumellam minimam depauperatam includente; quarta sensim in acumen subulatum attenuata, 5-nervi, nuda, glumellam paulo breviorem et florem hermaphroditum amplectente.

Planta debilior, nodis breviter barbatis; foliis angustioribus, vaginis ore barbatulis, caeterum nudis; lamina supra magis quam infra scabra. Spica angustior, vix tripollicaris. Rachis breviter hirsuta. Pedunculi brevissimi, basi pilis brevibus cincti. Spiculae geminatae, rarius solitariae, 6-7mm. longae intra involucrum brevissime pedicellatae. Involucri setae stramineae, spiculas subaequantes, nonnullae (2-3) longiores et ultra spiculas emergentes, omnes evidenter scabrae, interiores medio parce plumosae. Spiculae omnes uniflorae, flore masculo non evoluto. Gluma prima minima, oblonga, obtusa vel emarginata; secunda paulo longior, ovata, integra vel apice subdentata, nervis 1-3 tenuissimis percursa, caeterum tenuissime membranacea et hyalina. Gluma tertia spicula $^1/_3$, rarius $^1/_2$ brevior, oblongo-lanceolata, ex apice obtuso cuspidata, margine membranacea, trinervis vel rarius 5-nervis, nervis lateralibus brevioribus et tenuioribus, glumellam depauperatam $^2/_3$ breviorem hyalinam includens. Gluma quarta longe et sensim acutata, 5-nervis, ad nervos scabriuscula, caeterum glabra, glumellam includens breviorem, apice valde et abrupte angustatam, truncato-bidentatam, dorso minutissime papillosam. Antherae loculi apice penicillati, basi apiculati. Stylus simplex persistens; stigma elongatum ad medium bifidum, breviter pilosum.

In consortio Penicillariae cordofanae colitur.

Proxime accedit ad Pen. vulpinam et Plukenetii, sed setis involucri parcius plumosis, glumis spathaceis angustis, gluma tertia longius cuspidata et gluma quarta sensim in acumen longum producta valde singularis est Nihilominus (una cum P. fallaci et Raddiana) ad typum P. typhoideae pertinere videtur.

11. PENICILLARIA SPICATA Willd. Enum. et Schlecht. l. c. p. 563, antiquitus nota et teste Clusio per Hispaniam in hortos introducta, secundum Jacquinum (qui Arduinum citat) in regno Tunetano nomine „Droh" culta, a praecedentibus omnibus longius recedit et speciem bene distinctam repraesentare videtur. Spica omnium crassissima, oblonga; pedunculus involucro sesqui-vel duplo longior, longe pilosus; involucrum spiculas vix aequans, bispiculatum (rarius tri-vel unispiculatum); spiculae biflorae, rarissime uniflorae; glumae spathaceae perminutae, dilatatae, hyalinae, enerves; gluma tertia spicula $^1/_4$-$^1/_3$ brevior (in spiculis unifloris $^2/_3$ brevior), late truncato-rotundata vel leviter emarginata, apiculata, trinervis, glumellam aequilongam apice non productam amplectens; gluma quarta breviter acuminata, 5-nervis, versus marginem longe et dense barbata. (Vidi specimina ex horto Berolinensi, Carlsruhano, Parisiensi etc.) A. Braun l. c.

12. PENICILLARIA WILLDENOWII Klotzsch ined. secundum specimen olim in horto Berolinensi cultum involucro brevi, spicularum indole et praesertim gluma quarta longe barbata cum P. spicata convenit, sed spica subcylindrica elongata, superne sensim attenuata et pedunculis involucro dimidio vix longioribus ad P. Dochne et typhoideae typum accedit. Gluma tertia spicula paulo brevior, latissime truncato-rotundata, medio vix apiculata, plerumque 5-nervis. — A. Br. l. c.

13. PENICILLARIA MOSSAMBICENSIS Klotzsch ined., a cl. Peters in regno Mossambicensi, ubi a Lusitanis „Mexoeira" dicitur, lecta, spicae habitu P. Willdenowii et magis etiam P. speciosam aemulatur et spicularum indole cum priore adeo convenit, ut ad eundem typum pertinere videatur. Caeterum a P. Willdenowii differt glumis 1- et 2-elongatis (prima spicula ⅓, secunda ¼ breviore) et gluma tertia (floris masculi) quartam margine inconspicue pilosulam (nec longe barbatam) fere aequante. — Al. Br. l. c.

14. PENICILLARIA DEFLEXA Anders. in herb. reg. Berol., itidem in regno Mossambicensi culta et a cl. Peters reportata, habitu spicae minus crassae, exacte cylindricae et involucris (spiculis) densissime confertis, superne patentissimis, inferne reflexis Penicillariam typhoideam in Flor. aegypt. a Delileo depictam aemulatur, sed glumarum characteribus ab omnibus formis aegyptiacis supra commemoratis longe diversa est. Pedunculus dimidium involucrum aequans, pilosus. Involucrum spiculas geminatas aequans vel paulo superans setis valde plumosis, eminentibus nullis. Pedicelli spicularum proprii satis elongati, quartam vel tertiam spiculae partem aequantes. Spiculae biflorae, rarius uniflorae, oblongae, obtusiusculae. Glumae spathaceae hyalinae, enerves, prima in spiculis unifloris valde depauperata, secunda major truncata quartam spiculae partem nonnunquam aequans. Gluma tertia in spiculis unifloris spiculae dimidiae longitudine, late truncata et emarginata, 4—5-nervis; in spiculis bifloris spiculam fere aequans, late truncata (non mucronata), 4—5-nervis, glumellam aequilongam apice late truncatam amplectens. Gluma quarta (floris hermaphroditi) apice trifida (i. e. profunde emarginata et medio mucronata, mucrone lobos laterales aequante), 5-nervis, margine brevissime ciliata, caeterum nuda et aeque ac glumella durius cartilaginea. — Al. Br. l. c.

15. PENICILLARIA MACROSTACHYA Klotzsch ined. (*P. nigritarum* Schlechtd. l. c. p. 561. Panici Americani sesquipedalis spica Clus. plant. hist. lib. VI. p. CCXVI.) in Senegambia sub nomine „Petit-mil" culta, secundum specimina herbarii Kunthiani praecedenti affinis, a qua differt spica crassiore et longiore, omnium longissima, pedis longitudinem superante (in specimine altero herb. Kunth, fasciato-bipartita!); involucro breviore; spiculis patentibus, sed non reflexis, atro-purpurascentibus, intra involucrum longe pedicellatis indeque involucrum longe superantibus, geminatis, abbreviatis, omnibus bifloris; glumis et glumellis omnibus latioribus; gluma quarta minus profunde emarginata, medio latius apiculata, versus marginem pilis longis dense barbata, glumellis quoque dorso secus nervos longe ciliatis.

16. PENICILLARIA LEUCOSTACHYA Klotzsch ined., itidem in Senegambia sub nomine „Petit-mil" culta, praecedenti certo affinis, sed minor et spica cylindrica, angusta, obtusa, albida insignis. Involucrum brevissime pedunculatum (subsessile), spiculas aequans, setis nonnullis spiculas paulo superantibus, interioribus plumosis. Spiculae geminatae, brevissime pedicellatae, oblongae, obtusiusculae, biflorae. Glumae involucrales hyalinae ciliolatae, prima angustior et spicula multoties brevior, secunda latior, spicula ¾ vel ⅔ brevior. Gluma tertia spicula ⅓ brevior, latissime truncata at leviter emarginata (non apiculata), margine superne fimbriato-ciliata, 3—5-nervis, glumellam aequilongam late truncatam dorso pilosam amplectens. Gluma quarta breviter acuminata, juxta apicem utrinque auriculata, 7-nervis, versus marginem longe pilosa. (V. spec. a cl. Leprieur lectum in herb. Kunth.) — Al. Br. l. c.

P. deflexam, macrostachyam et leucostachyam, quamquam facile distinguendas, tamen ejusdem typi specifici modificationes esse censeo, sub nomine communi Penicillariae nigritarum conjungendas.

17. PENICILLARIA PERROTTETII Klotzsch ined., in Senegambia ad Walo a cl. Perrottet 1830 lecta (nescio utrum spontanea an culta), a praecedentibus longe discedit. Spica cylindrica, elongata, laxa, fusco-nigricans; involucra subsessilia, spiculas magnas geminatas aequantia, e setis numerosissimis fusco-nigricantibus, interioribus albo-plumosis, una reliquis longiore et spiculas superante; spiculae biflorae, attenuatae, laevigatae, durae, glumae spathaceae minutae, truncatae et subdentatae, enerves, coloratae (fusco-nigricantes); gluma tertia spicula paulo brevior, oblonga, late exciso-truncata, 3—5nervis, glumellam paulo longiorem subtruncatam (apice non angustato-productam) nudam amplectens; gluma quarta breviter acuminata, superne conspicue 7-nervis, margine inconspicue ciliolata. (V. in herb. Kunth.) — Al. Br. et Bouché l. c.

18. PENICILLARIA STENOSTACHYA Klotzsch ined., in Senegambia prope Caybar a cl. Leprieur 1830 lecta, cum praecedente ad eundem typum specificum, cui nomen *Penicillariae nigricantis* propono, pertinet, insignis spica magis etiam elongata et angustata, involucris omnino sessilibus unispiculatis, setis spicula brevioribus, una alterave spiculam aequante, glumis spathaceis minus coloratis subfuscescentibus, gluma tertia plerumque 3-nervi, quarta 5-nervi, glumella florismasculi et hermaphroditi tenuissime papillosa. Color spicularum et setarum demum fusco-nigricans, ut in praecedente. Caryopsis glumas non excedens, a dorso valde compressa, diaphana, corneo-cinerascens. (V. in herb. Kunth.) — Al. Braun l. c.

19. PENICILLARIA ALOPECUROIDES (Panicum alopecuroideum et Alopecurus indicus L.; Penic. ciliata Willd. Enum.; Penic. cylindrica Röm. et Sch.; Pennisetum Linnaei Kunth En.; Pennis. alopecuroides Wight herb.), quam in peninsula Indiae orientalis (spontaneam?) cl. legit Wight, formis debilioribus Penicillariae vulpinae et Plukenetii quidem similis est, sed certe speciem distinctam sistit, colore spicae helvolo vel fuscoaureo primo intuitu recognoscendam. Spica cylindrica, superne attenuata, laxa, sursum imbricata. Pedunculus involucri spiculis duplo vel quadruplo brevior, pilosus. Involucrum spiculis geminatis, rarius solitariis sesqui-vel duplo fere longius, setis interioribus plumosis, nulla eminente. Spiculae breviter (altera paulo longius) pedicellatae, biflorae vel uniflorae. Glumae spathaceae perminutae, rotundatae, hyalinae, enerves: gluma tertia aut florem masculum fovens, spicula ⅓ brevior, apice late truncata et fimbriato-lacera, 5-nervis, glumellam paulo longiorem apice pariter truncatam amplectens; aut sterilis, spicula dimidia brevior, plerumque trinervis: gluma quarta superne attenuata et convoluta, apice truncata et fimbriata, 7—9-nervis, margine vix ciliolata, stramineo-nitens et cartilaginea. Glumella floris hermaphroditi quoque cartilaginea et glabra, apice non angustato-producta. Antherarum loculi apice penicillati, basi apiculati. (V. spec. Wightiana in herb. reg. Ber. et Neesiano. — Al. Br. l. c.

20. PENICILLARIA ROXBURGHII (Panicum spicatum Roxb. Penicillaria spicata Wallich in herb. reg. Ber.), planta in Ind. orientali nomine „*Bujera*" s. „*Guntee*" culta, secundum specimen Wallichianum in horto bot. Calcuttensi cultum a praecedenti differt statura majore, spica crassiore et densiore (5" longa et ¾" fere crassa). pedunculis involucrum subaequantibus, involucris plerumque unispiculatis (ad basin spicae bispiculatis), spiculas brevius superantibus; spiculis bifloris; gluma tertia spiculam subaequante, 3—4nervi, glumellam vix longiorem includente. Color aureo-nitens ut in praecedente, cujus varietas culta esse videtur.

Nomine communi *Penicillariae indicae* utramque conjungendam esse censeo. — Al. Braun et Bouché l. c.

21. PENICILLARIA GYMNOTHRIX *A. Braun et Bouché l. c.*

Foliis nudis; spica cylindrica, spiculis demum patentissimis; involucris brevissime pedunculatis, plerumque unispiculatis, setis spiculam partim aequantibus, partim paulo superantibus, una spiculam duplo superante, omnibus nudis, obsolete seabriusculis; spiculis lanceolatis, sensim acuminatis, nudis: gluma prima et secunda spicula multoties brevioribus, subaequalibus, hyalinis, acutis, uninerviis; gluma tertia sterili, spicula ¼—½ breviore, lanceolata, cuspidata, trinervi; quarta sensim acuminata; 5-nervi,

glumellam aequilongam superne valde angustatam et florem hermaphroditum amplectente.

Statura et folia Penicillariae sociae; nodi parce pilosi; spica longius exserta magnitudine spicae P. sociae. Pedunculi brevissimi basi pilosi. Involucra unispiculata, in parte inferiore spicae nonnunquam bispiculata. Setae involucri violascentes. Spiculae omnes uniflores, 6—7mm. longae. Glumae 1. et 2. ovatae, nervo unico apicem plerumque attingente instructae, ³/₄—1mm. longae. Gluma tertia quoque ad plurimam partem hyalina, nervis tribus viridibus scabriusculis percursa. Gluma quarta ovato-lanceolata, marginibus inflexis lanceolata, sensim attenuata et apice acuminata. Antherarum loculi, ut in reliquis, apice penicillati. basi apiculati, apiculis divergentibus. Stylus et stigma ut in reliquis.

Colitur commiscue cum P. cordofana et socia.

Haec species ab omnibus reliquis discedit involucro e setis non plumosis, sed, ut in Penniseti sectione Gymnotrichis, nudis, vix scabris composito; attamen veram Penicillariam esse antherarum et pistilli characteres probant.

Adnotandum denique est Penicillariam chinensem Nees Mspt. (Pennisetum Steud. Syn. p. 108), quod pariter involucri setis nudis gaudet, non hujus generis, sed verum Pennisetum esse. Antherae muticae (non penicillatae) et styli a basi fere distincti! (V. spec. in herb. Neesiano).

22. PENICILLARIA TYPHOIDEA Fig. et de Not. Acad. Tor. 1854. p. 371.

Penicillaria spicata R. et Sch. (Knth. Agr. I. p. 165. quoad plantam Delilii.

Pennisetum typhoideum Del. l. c. a specie sub Penicillaria spicatae nomine in vol. 2. p. 120. Agrostogr. Kunthianae descripta, certissime differt. In nostra ut in planta Delilii involucra cum locustis sessilia (sessiles ou très brevement pedicellées Del. l. c.) patenti-deflexa, densissima (tout-à-fait horizontaux après la fécondation Del. l. c.) Setae involucror. locustas aequantes (les plus longues égalent les épillets Del. l. c.), dum e contra locustae in planta Kunthii c. involucris pedicellatae, setae involucrorum locustis breviores, quae, ni fallimur, est species *Penicillaria spicata* Roem. et Sch.

Nomen a Delilio propositum reliquis praeponimus, c. de synonymia dubii adhuc baereamus.

In Aegypto inferiore et in Nubia.

ERIOCHAETA Fig. et De Notaris.

Acad. Tor. 1864. p. 374.

(*Penniseti sp.* Knth.-Endl.)

Ab ἔριος lana et χαίτη seta, ob setas involucrorum lanatas.

Vide l. c. gener. descr. amplam.

1. ERIOCHAETA SECUNDIFLORA Fig. et de Not. l. c. p. 375. t. XXX. fig. 1—13.
Vide descr. amplissimam l. c.
In Nubiae superioris regione Kordofan.

2. ERIOCHAETA DENSIFLORA Fig. et de Not. l. c. p. 376. tab. XXXI. fig. 1—12.
Vide descr. l. c. amplius.
In Nubia superiore iisdem locis ac praecedens.

3. ERIOCHAETA REVERSA Figari et de Notaris l. c. p. 378. tab. XXXII fig. 1—16.
Vide l. c. descr. amplam.
In Nubia superiore c. praecedente.

783. CENCHRUS L. (Beauv.)

(Knth. en. I. 165. et sppl. p. 120.)

Figari et de Not. Acad. Tor. 1854. p. 379.
Vide l. c. generis descr.

I. *Encenchrus* Fig. et de Notaris l. c.

Setae involucri demum induratae; interiores longiores, conniventes, locustas paulo excedentes, apice spinescentes inferiori parte pilis brevissimis plumatae.

1. CENCHRUS NILOTICUS Fig. et de Not. l. c. p. 380. tab. XXXIII. f. 1—15.

Vide l. c. descr. amplam.

Cenchro echinato quoad ad faciem similis, differt vere egregie aculeis involucri interioribus vix ima basi connascentibus, nec involucrum octofidum sistentibus.

In Nubia superiore ad fl. album et secus Nilum usque ad inferiorem Aegyptum ubi quandoque colitur.

II. *Aglaocenchrus* Figari et de Notaris l. c. p. 381.

Involucri setae interiores subulato-aristatae, inferne pilis longiusculis distichis plumatae, subdiadelphae; setis subliberis reliquis longiores locustas multo superantibus.

2. CENCHRUS HYSTRIX Fig. et de Not. l. c. p. 382 tab. XXXIV. f. 1—18.

Vide descr. l. c. amplam.

In desertis regionis Kordofan Nubiae superioris.

3. CENCHRUS CILIARIS var. nubicus Fig. et de Notàris l. c. p. 383. tab. XXXV. 1—16.

Vide l. c. descr. ampl.

Var. β. villiferus Fig. et Not. l. c.

Hab. in Nubiae superioris regione Kordofan.

Var. β. in deserto montano ad orientem vallis Niloticae. —

4. CENCHRUS RIGIDIFOLIUS Figari et de Notaris in Act. Tor. 1854. p. 386. tab. 36. f. 1—13.

Vide l. c. descr. amplam.

Cenchro ciliari facie quoque similis, distinctius tamen folior. forma et rigiditate, involucri setis interiorib. altius quam in ciliari concretis, flosculi inferioris neutri palea superiore inferiore ½ breviore, stigmatib. pilis patulis plumosis. —

Hab. in desertis regionis Kordofan Nubiae superioris. —

5. CENCHRUS PLATYACANTHUS Ands.

En. pl. ins. Gallopag. p. 139. et in Eugenies Resa Anderss. p. 47.

Culmis adscendentib., f. scabris, vaginis glabris; involucro subtruncato, irregulariter emarginato, latere introrso ad b. fisso, extus undique spicis planiusculis echinato, glabriusculo, spiculis plerumque ternis subbreviore; flosculo neutro unipaleaceo.

Hab. locis siccissimis graminosis reg. mediae in insulis Chatham et Charles abundans. (Ipse.)

Culmi caespitosi caet.

6. CENCHRUS GRANULARIS Ands. Anderss. l. c. p. 140.

Culmo erecto, f. scabris. vaginis pilosis; involucro apice subintegro, introrsum ad b. fisso, dorso tuberculato costato v. laeviusculo, spiculas includente.

Hab. locis graminosis declivibus reg. infer. ins. Chatham (Ipse).

Haec forma habitu quidem singulari subspecies praecedentis (C. platyacanthi) forsitan est habenda; formas tamen vere transitorias non in insulis vidimus.

785. ANTHEPHORA Schreb.

(Walp. Ann. III. 724.)

1. ANTHEPHORA CUSPIDATA Ands. En. pl. ins. Galapag. p. 141 et Eugenies Resa p. 48.

Spica tenui, glumis exterioribus acutatis, foliis vaginisque scabre pilosis.

Hab. locis graminosis reg. infer. ins. Indefatigable (Ipse).

Utrum species propria an var. tantummodo A. elegantis sit dijudicare non valemus.

Differt ab A. elegante: statura multo minori, culmi internodiis 2-3 summis stricte erectis, f. brevioribus c. vaginis pilosis, spica adhuc graciliori, rhachi evidentius alato-marginata, glumisque connatis in cuspidem viridulum excurrentibus.

2. ANTHEPHORA CUSPIDATA Ands. (an var. A. elegantis?) Anderss. on-Gallopagos-Oarnes vegetat. p. 141.

Spica tenui, glumis exteriorib. acutatis, f. vaginisq. scabre pilosis.

Hab. locis graminosis reg. inferior. ins. Indefatigable (Anderss.)

3. ANTHEPHORA PERSICA Boiss. diagn. XIII. p. 44.

A. perennis radice . . . . culmis simplicibus basi ascendentibus subgeniculatis dein erectis inferne foliosis superne longe denudatis glabris, vaginis patule hispidis limbo lineari plicato subcoriaceo laevi glaucescenti, spica terminali cylindrica elongata, axi valde flexuosa persistenti ad fasciculos spicularum tuberculis pilosis obsita, spiculis bifloris 6-7 basi connatis circa spiculam centralem gluma destitutam concentrice dispositis fasciculos spiculiformes ovatos secus rachidem dense imbricatos sessiles articulatos deciduos formantibus, gluma exteriori coriacea albida lanceolata breviter acuminata plana multinervi pungenti dorso breviter hirta basi angustata ad periphaeriam fasciculi sita, superiori interna multo angustiori breviorique-hyalina e basi angustissime lanceolata subulata hirsuta, spiculis gluma exteriori brevioribus eique adpressis hyalino-membranaceis exteriori unipaleacea oblonga obtusiuscula 5-nervi superne marginibus longe penicillato-ciliata spiculam interiorem aequilongam e paleis glabris oblongo lanceolatis acutiusculis aequilongis subenerviis constantem amplectenti.

Hab. in Persia australi loco et numero non notatis (Aucher).

Culmus in specimine meo bipedalis, spica fere tripollicaris diametro $2^1/_2$ lineas lata, glumae spicularum inaequales majores fere 4 lineas longae. Species nova generis Hypodaeuri a cl. Hochst. in pl. Schimp. Abyssin. Sect I. No. 71 propositi sed quod ipse auctor postea in Bot. Zeit. ad Antephoram jure reduxit.

LAPPAGO Schreb.

(Knth. Agr. I. 169. Endl. g. p. 86. n. 786.)

Figari et de Notaris in Act. Tor. 1854 p. 387.

Cfr. l. c. generis descr.

1. LAPPAGO DECIPIENS Figari et de Notaris l. c. tab. 37 fig. 1—12.

Cfr. l. c. plantae descr. amplam.

Cum Lapp. racemosa prima fronte confundi potest, sed distincta ramellis paniculae 4-5-6 locusuiferis, palea neutra non cuspidato-mucronata, setis paucioribus nunquam hamatis denique palea inferiore flosculi perfecti obtusa, quae in racemosa ex ap. obtuso nervo breviter excurrente mucronata.

In deserto regionis Kordofan in Nubia superiore.

2. LAPPAGO PHLEOIDES Figari et de Notaris in Acad. Tor. 1854 p. 360 tab. 38 f. 1—12.

Cfr. l. c. pl. descr. amplissimam.

A L. decipiente nec non a L. racemosa toto coelo diversa, vel tenuitate omnium partium, vel ramulis paniculae brevissimis locustam unicam fertilem ferentib., v. palea neutra 5 nervi, v. demum palea inferiore flosculi perfecti cuspidato-setigera.

In Nubiae superioris regione Fazogl.

786. TRAGUS Hall.

(Endl. gen. sub Lappago Schreb.)

1. TRAGUS BREVICAULIS Boiss. diagn. XII. p. 44.

Tr. annuus caulibus brevibus geniculatis ascendentibus, foliis glaucis, vaginis glabris superioribus dilatis, limbo lineari-lanceolato margine ciliis rigidis brevibus distantibus pectinato, ligula ad seriem pilorum reducta, spicis e folio supremo vix exsertis

cylindricis laxiusculis, spiculis in pedunculo brevissimo geminis erectis, glumae superioris aculeis ad unumquemque nervum 5-6 basi distantibus rectiusculis elongato-conicis parte inferiori flavidis superiori hyalinis.

Hab. in aridis Persiae australis Aucher n. 5472, Arabiae felicis Schimper n. 792, regni Kordofani Kotschy n. 37.

Ab affini Tr. racemoso mihi sat differre videtur caulibus abbreviatis, glaucescentia, foliis validius et brevius ciliatis, inprimis aculeis glumarum paucioribus basi non confluentibus nec apice uncinatis. Tr. occidentalis spiculis minutis aliisque notis longius differt.

791. SPINIFEX L.

(Knth. ann. I. p. 174 et suppl. p. 129.)

1. SPINIFEX HIRSUTUS Labill. (N. Holl. t. 230-231). — Steudel. Synops. p. 1**. 2. Hook. fil. fl. Nov. Zeel. p. 292. — *Spinifex sericeus* Raoul. En. pl. — *Spinifex inermis* Banks. et Sol. — *Ixacum inerme* Sol. Forst. prodr.

Hab. in Nova Zelandia: Northern Island; bay of Island, Auckland, East Cost etc.

Tribus X. STIPACEAE Knth. Gr.

794. PIPTATHERUM Pals.

(Walp. Ann. III. 727 sub Urachne sect. 1.)

1. PIPTATHERUM MILIACEUM Coss.

Explorat. scient. de l'Alger. phaner. Coss. not. 129; Willkomm et Lange Pr. fl. Hisp. I. p. 61.

P. multiflorum P. B. (Knth. en. I. 177 et suppl. 131.)

Urachne parviflora Trin. — Steud. syn. p. 121.

Hab. in Hispaniae locis incultis reg. inferioris passim.

800/4. NASSELLA. Em. Desv. Gram. Chil. in Gay flora chil. t. VI. p. 263.

(Urachne sect. IV. Walp. Ann. III. 729.)

Spiculae uniflorae. Glumae 2, subaequales, 3-5-nerviae, acutae, carinatae, florem superantes. Flos basi articulatus, callo brevissimo obtuso. Palea inferior coriacea, oblique obovata, a lateribus compressa, hinc gibba, glabra v. pilosa, laevis, marginibus subconvolutis arcte clausa; arista lateralis, decidua, contorta. Palea superior membranacea, multo brevior, concava, enervia. Squamulae 3, obovato-truncatae, postica angustiore. Stamina 3. Antherae tum lineares conformes apice pilosae, sub anthesi e rima paleae inferioris exsertae, tum dissimiles, ovatae, inclusae. Ovarium glabrum; styli breves v. subnulli; stigmata plumosa. Caryopsis oblique rotundato-obovata, compressa, hinc hilo lineari notata. Embryo maximus, epiblasto maximo gemmulam totam tegente praeditus.

Urachne sect. Nassella Trin. et Rupr. Stipac. in Act. Petrop., ser. VI. nat. V, p. 20.

Piptatheri sp. Nees ab Esenb., in Gram. Meyen, Nov. Act. Car., XIX, suppl. II. p. 148, non Beauv.!

1. NASSELLA PUBIFLORA l. c. p. 264. — Urachne Trin. et Rup. l. c.

2. NASSELLA MAJOR l. c. p. 265. — Urachne Trin. et Rupr.

3. NASSELLA RAMOSA l. c. p. 266. — Urachne Steud. et Hochst. Mss. in pl. Bertero, non Urachne laevis Trin. et Rupr. l. c. — Piptatherum laeve Meyen, Iter., I. p. 484 ex parte.

4. NASSELLA CHILENSIS l. c. p. 267. — Urachne Trin. Act. petrop. 1848 p. 123. — Caryochloa chilensis et refracta Spreng. Mss. in pl. Poeppig. — Piptatherum Lindleyanum Nees ab Esenb. in Act. Leopold. 1843 t. XIX. suppl. II. p. 17 (149).

5. NASSELLA PUNGENS Em. Desv. l. c. p. 268 t. 75 f. 1. N. glauca, caespites densos pungentesque agens: culmis 6-12-pollicaribus, multinodis, filiformibus, duris, teretibus; foliis vix pollicaribus, anguste linearibus, convoluto-teretibus, filiformibus, divaricatis, pungentibus, intus pubescentibus, vagina summa paniculam angustam, 1-2-pollicarem amplectente; glumis subaequalibus, lanceolato-acuminatis, trinerviis; palea inferiore ⅘ lin. longa basi totaque albo-pilosa, nitida, chartacea, clausa, subtereti, oblique obovata; arista scabriuscula, 5-6 lin. longa; palea superiore ⅓ breviore, enervia membranacea obovata; caryopsi fusca, oblique rotundata, truncata; antheris inaequalibus, ovatis. — Hab. San Fernando Chile. (Gay.)

PIPTOCHAETIUM. Presl. Em. Desv. Gram. Chil. in Gay. flora Chil. t. VI. p. 269.

(Urachne sect. V. in Walp. Ann. III. 729.)

Spiculae uniflorae. Glumae 2, subaequales, 3-5-nerviae, acutae, florem superantes. Flos basi articulatus, callo tum brevissimo obtuso, tum elongato acuto, longe piloso. Palea inferior coriacea, e lateribus compressa, marginibus approximatis subclausa; arista lateralis vel terminalis. Palea superior compressa, dorso coriacea et bicarinata, inter carinas valde approximatas et in mucronem palea inferiore longiorem excurrentes sulcata, apice truncata, navicularis. Squamulae 3, oblongae, postica angustiore. Stamina 3. Ovarium glabrum. Styli breves. Stigmata plumosa. Caryopsis compressa hinc hilo lineari notata; embryo (in chilensibus saltem) maximus, epiblasto maximo gemmulam totam tegente praeditus.

Piptochaetium Presl. Rel. Haenk. I. 222. t. 37. f. 1. charact. teform. — *Urachne* sect. V *Piptochaetium* Trin. et Rupr. Monogr. Stip. in Act. petrop. ser. VI. nat. V. p. 22. — *Stipae* spec. Kth. Agr. Syn. p. 179.

1. PIPTOCHAETIUM PANICOIDES Desv. l. c. p 270. tab. 75. f. 1. — Stipa panicoides Lamk. Poir. — Stipa setifolia Kth. Agr. synopt. p. 182. — Pipt. setifolium Presl. l. c. — Urachne simplex Trin. et Rupr. l. c. — Oryzopsis setacea Rich. in Dict. class. XII. p. 445. — Valdivia (Gay.).

2. PIPTOCHAETIUM TUBERCULATUM Desv. l. c p. 272. P. glaucum, culmis sterilibus dense caespitosis, fertilibus strictis, 4-12-pollicaribus, 2-nodis; foliis convoluto-setaceis, 8-gonis, scabriusculis; ligula ovata, integra; panicula pollicari, pauciflora, angusta; spiculis 1½ lin. longis; glumis late ovatis acuminato-cuspidatis, basi sub 5-nerviis; palea inferiore chartacea, clausa, lateribus compressa, oblique rotundato-obovata, striatula, tuberculato-asperata, demum obscure castanea, basi pilis cincta, circiter 1 lin. longa; arista 8 lin. longa, decidua; palea superiore aequilonga, compressa, elliptico-truncata, cuspidata, chartacea, antherarum ovalium loculis basi obtusis, apice cuspidato-mucronatis. — Stipa panicoides Nees ab Es. Agr. Brasil. p. 376. — Kth Agr. syn. p. 162. — Gram. II. t. 122. — Agr. suppl. p. 137. — Non Lmk. Ill. I. 158. n. 794. — Urachne panicoides Trin. et Rup l. c. Stip. p. 23

Hab. Valdivia (Gay) Osorno (Bridges in herb. Webb.) Chili. In Montevideo et Brasilia meridionali valde commune.

3. PIPTOCHAETIUM OVATUM Desv. l. c. p. 273. — Stipa ovata Trin. Act. petr. 1829. p. 73. Kunth Agr. syn. p. 181. — Urachne setosa Trin. Act. petr. 1839. p. 124. Trin. et Rupr. Stip. p. 24, excl. synonym. omnibus.

4. PIPTOCHAETIUM BICOLOR Desv. l. c. p. 273. — Stipa bicolor Vahl. Symb. II. p. 24. Kth. Agr. syn. p. 181. — Non Stipa bicolor sed St. intermedia. Trin. et Rupr. Act. petr. 6 ser. t. V. p. 26.

796. DICHELACHNE Endl.

(Walp. Ann. III. p. 725.)

1. DICHELACHNE CRINITA Hook fil. (fl. Nov. Zeel. p. 293): glaberrima scaberula v. molliter pubescens, foliis planis involutisve, panicula elongata coarctata spiculis densissimis rarius lobata v. rariflora aristis flexuosis quasi crinita, glumis angustis longe acuminatis florem breviter stipitatum excedentibus, palea inferiore scaberula acuminata apice integra v. bifida arista dorsali supra medium inserta longissima flexuosa, haud tortili, palea superiore breviore apice bidentata. Hook. fl. Tasm. 2. p. 111. — *D. vulgaris* et *Forsteriana*, *D. Hookeriana* et *D. longiseta* Trin. et Rupr. Act. Agr. Imp. scient. petrop. 1842. Steud. synops. p. 120. 2. — *Mühlenbergia mollicoma* Nees (in Hook. Lond. Jour. II. 414) Steud. synops. 180. 2. — *Agrostis crinita* Br. prodr. *Apera crinita* P. Beauv. *Cinna crinita* Trin. Fund. 118. *Anthoxanthum crinitum* Linn. Tent. prodr. Labill. fl. Nov. Holl. v. 2. p. 115. t. 263. *Agrostis barbata* Banks et Sol. Mss. et Icon.

Hab. in Nova Zelandia: Northern Island, copiose in montibus aridis argillaceis (Banks et Solander etc.). In Tasmania copiose ut et in Australia extratropicali.

Gramen valde variabile, glaberrimum, v. foliis inferioribus vaginisque tomento mollibus. Culmi annui caespitosi, 1—3-pedales, inferne foliosi. Panicula 4—6-poll. longa, pallide flavo-virescens, lucida, spiciformis. — A *Dichelachne* recedit arista non contorta, ab *Agrostide* flosculo pedicellato, a *Mühlenbergia* glumis longis.

2. DICHELACHNE SCIUREA Hook. fil. (H. New Zeal. p. 294).: laevis v. culmis basi vaginis foliisque scaberulis, foliis planis v. involutis, panicula elongata laxo rariflora, glumis inaequalibus acuminatis florem vix superantibus, arista tortili palea inferiore, scaberula subtriplo longiore. — Hook. f. Fl. Tasm. 2. p. 111. Agrostis sciurea Br. Prodr. Mühlenbergia Trin. Diss., Steud. synops. p. 180. 2. Stipa micrantha Nees Diar. Ratisb.

Hab. in Nova Zelandia: northern Island, bay of island et Auckland (Cunningham, Colenso, Sinclair etc.). In Tasmania copiosa, New South Wales, Victoria, Insula Norfolk.

D. crinita gracilior, sed ei valde affinis, panicula subracemosa, pauciflora. Glumae quam in *D. crinita* brevioribus, flosculum aequantes; arista contorta paleam superiorem non quadruplo excedente.

3. DICHELACHNE STIPOIDES Hook. fil. (fl. New Zeal p. 294 t. 66): caespitosa, glaberrima, polita, foliis elongatis strictis setaceo-involutis, panicula erecta contracta pauciflora parce ramosa, glumis laevibus longe setaceo-acuminatis flosculum $^1/_3$ excedentibus, paleis subcoriaceis inferiore sericeo-villosa, arista geniculata glaberrima flosculo bis terve longiore. — Hook. fl. Tasm. 2. p. 112. *Avena angustifolia* Banks et Sol. Mss.

Hab. in Nova Zelandia: northern island, in rupibus marinis; ora orientali (Banks et Solander); bay of island et Auckland (Sinclair etc.). In Tasmania copiose, praesertim prope mare.

Gramen pulchrum, dense caespitosum, rigidum, pallidum, habitu Stipae. Culmi $1^1/_2$—3-pedales; folia teretia; panicula 4—6 pollices longa stricta erecta; glumae $^1/_2$—$^3/_4$ poll. longae, albae 6 flavidae membranaceae lucidae; palea inferior apice bidenticulata; arista circiter pollicaris.

798. STIPA L.
(Walp. Ann. III. 730.)

1. **STIPA ROSTRATA** Ands.

Anderss. En. pl. ins. Gallopag. p. 142; Eugenies Resa p. 142.

Panicula spiciformi, b. subinterrupta, ramis solitariis v. plurib. a b. spicatis et divisis stricte adpressis; glumis h. alinis inaequalibus aristatis, inferiore breviore acuminata, superiore ap. bifida; flosculi palea exteriori, glumae inferioris aristam aequante, levi, in rostrum 4—6: ies tortum attenuata, arista vix b. torta, 4-lineali.

Hab. locis maxime lapidosis et sterilib. c. Setaria Antillarum et Eutriana pilosa aliisque, reg. infer. insulae Chatham (Ipse). Aristidae subspicatae habitu externo et omnib. partib. spicularum similis, ut non nisi arista simplici rectiuscula accurate distinguatur. Radicis fibrae b. hirsutae, culmi elatiores, folia plana!

2. **STIPA POGONATHERA** Em. Desv. Gram. Chil. in Gay: Fl. Chil. t. VI. p. 277.

S. culmis teretibus, rigidis, duris, albido-pubescentibus; nodis glabris; foliis tereti-convolutis, intus pubescentibus; ligula oblonga pubescente, utrinque pilosa; panicula 6—12-pollicari, vagina summa basi circumdata, plumosa, obscura albida; glumis 3-nerviis, angustis, acuminatis, inferiore paulo majore, flore duplo longiore; floris pedicello glabro; palea inferiore 4—4½ lin. longa, angusta, tereti, fusiformi, albido-pilosa, in rostrum glabrum, ultra apicem scarioso-appendiculatum attenuata; arista 3-pollicari, fere a basi usque ad apicem barbata, recurva; palea superiore vix ⅓ breviore, lineari-oblonga, extus pilosa, concava; antheris 2½—3 lin. longis.

Hab. Provincia Coquimbo, Chili (Gay).

3. **STIPA CHRYSOPHYLLA** Em. Desv. Gram. Chil. in Gay flora chil. t. VI. p. 278. t. 76. f. 2.

S. pulcherrima, dense, caespitosa, rigidissima, aureo-fulva; foliis scabris, filiformibus, tereti-convolutis, pungentibus; ligula brevi, obtuse biloba; panicula plumosa, stricta, contracta; glumis subaequalibus, 7—10 lin. longis, basi atro-violaceis, apice scariosis, nonnumquam albidis; flore 2½—3½ lin. longo; pedicello fere glabro; palea inferiore elongata, cylindracea, undique albo-pilosa, apice utrinque lobo scarioso coronata; arista 11—16 lin. longa, ultra medium geniculata, sub genu contorta et a basi barbata, supra genu nuda; pilis 3—4 lin. longis; palea superiore ⅓ breviore, extus pilosa.

Var. α *minor*. Foliis culmos 6—9 pollicares aequantibus; vagina summa 2—2½-pollicari, vix ventricosa; panicula 1½—2½-pollicari.

Var. β *majór*. Foliis culmo 1—1½-pedali dimidio brevioribus, vagina summa ventricosa, 4-pollicari et ultra; panicula 3½—6-pollicari; glumis pallidioribus; flore magis velutino.

Hab. in Cordilleris elevatis Chilensibus (Gay).

4. **STIPA TORTUOSA** Em. Desv. Gram. Chil. in Gay: flora chil. t. VI. p. 281.

S. basi tortuosa, pulverulenta, ramosa, culmis 1—1½-pedalibus, 6—8 nodis, duris, striatis, tenuissime asperatis, a basi ad apicem scaberulis; internodiis rectis, rigidis, nodis saepius pubescentibus; foliis anguste linearibus, convoluto-filiformibus, 1½—3-pollicaribus; ligula ovata; truncato-lacera; panicula 2—5-pollicari, laxiuscula; glumis aequalibus, laxis, 5—6 lin. longis, nitide viridi-violaceis, 5-nerviis, nervis anastomosantibus; flore pedicellato, pedicello piloso; palea inferiore 2¼—3 lin. longa, tereti-convoluta, pilis rufescentibus undique dense hirsuta, cum pilis 4½ lin. longa; arista non decidua, 11 lin. longa, nuda, contorta, bis geniculata, pubescente; palea superiore glabra, fere ½ breviore.

Hab. in Cordilleras de Donna Ana (Gay).

5. **STIPA BREVIPES** Em. Desv. Gram. chil. in Gay: flora chilena t. VI. p. 282.

S. caespitosa; culmis fertilibus 1½-pedalibus, duris, laevibus, obscure olivaceis; nodis glabris; vaginis laevibus, summa a panicula remota; culmis sterilibus vaginarum

laevium albidarumque tunica arcta, bipollicari basi amplexis; foliis simul ex hac tunica exeuntibus, teretibus, junciformibus, incurvis; panicula 5—8-pollicari, angusta, depauperata; glumis subaequalibus, 5—6-lin. longis, ovatis, concavis, sordide rubescentibus; floribus cum pedicello minimo, ⅙ lin. longo, hispido, 3—3¼ lin. longis; palea inferiore rubescente, undique pilis rigidis patulisque hispida, aequilaterali, fusiformi-elongata, cylindracea, apice truncata, utrinque lobulo scarioso aucta, pilisque longioribus quasi penicellata; arista rubescente, inferne torta, 1-pollicari, pilis densis brevibusque obsita; palea superiore inferiorem aequante; dorso hispida.

Hab. in provinciis centralibus Reipubl. Chilensis (Gay).

6 STIPA LAXA Em. Desv. Gram. Chil. in Gay Fl. Chil. t. VI. p. 283.

S. erecta, canescens, 2—2½-pedalis, culmis teretibus sub nodis velutinis pubescenti-scabris; foliis 5—9-pollicaribus, linearibus, convolutis, velutino-hirtis; vaginis apice pubescentibus; ligula fere nulla; culmis sterilibus ½ brevioribus, velutino-hirtis; panicula effusa, laxissima, 4—8-pollicari, pallida, glumis lanceolatis, apice setaceo-acuminatis, medio latioribus, 6 lin. longis, pallidis; flore cum pedicello sericeo-piloso 3—3½ lin. longo, compresso; palea inferiore inaequilaterali, hinc sub apice gibberula, usque ad medium pilosa, punctulata, elongato-obovata, in apicem brevem, angustum, non gibbosum, ciliis coronatum desinente; arista 25—28 lin. longa, nuda; palea superiore minima.

Hab. Chile (Gay).

7. STIPA MANICATA Em. Desv Gram. Chil. in Gay Fl. chil. t. VI. p. 288.

S. caespitosa, erecta, culmo fertili bipedali, sterilibus multum brevioribus, basi non cylindraceo-tunicatis; foliis 4—6-pollicaribus, lineari-convolutis, intus pilosis; ligula brevissima, plicata; vagina summa ventricosa, paniculae basim amplectente; panicula laxa, nutante, 8-pollicari; glumis angustis 5—6-lin. longis; flore cum pedicello sericeo-piloso 3½—4 lin. longo; palea inferiore undique tuberculato-scabra, praeter carinam ad medium usque pilosam glabra, aequilateri, fusiformi, utrinque attenuata, apice angustato, cylindrico, ⅓ lin. longo, rubro-fusco, corona pilorum basi coadunatorum superne manicato; arista nuda, 19—21 lin. longa; palea superiore minuta; antheris 3, inaequalibus. — S. bicolor Cav.? V. tab. 466 (non Vahl Symb. II. 24.).

Hab. prope Santiago-Chile (Gay).

8. STIPA PARVIFLORA Desf. (Atl. t. 29.) — Steud. Synops. p. 129. 71. — *St. juncea* Kunze Chlor. 61 non L.

β. *contorta* Lge. (pug. I. p. 36): auctis non rectis sed spiraliter flexuosis et invicem contortis. — Willk. et Lge. Prodr. fl. hisp. I. p. 59.

Hab. in collis gypsaceis ad Aranjuez.

9. STIPA DAMASCENA Boiss. diagn. XIII. p. 45:

S. perennis caespitosa glauca foliis radicalibus convoluto-filiformibus brevibus rigidis patulo-recurvis undique retrorsum puberulis, caulinis glabris limbo brevi tenui culmis erectis mediocribus, paniculae contractae fol is summis involutae ramis solitariis vel geminatis 1—2 spiculiferis, glumis longe setaceo-subulatis subinaequalibus glumella ad ⅔ usque undique adpresse pilosula plus duplo longioribus arista caduca inferne tortili pilosa superne plumosa 4—5 pollicari.

Hab. in collibus aridissimis pone urbem Damascum sitis ubi legi ineunte Maio 1846.

Folia sesquipollicaria recurva, culmi semipedales, gluma inferior 14—15 lineas flosculus 5—6 lin. longus. St. arabica cui affinis differt foliis glabris duplo longioribus tenuioribusque rectis, glumis subaequalibus. St. Ehrenbergiana habet staturam elatam et aristas elongatas St. pennatae.

10. STIPA TENACISSIMA L. Explor. scient. de l'Alg. II. p. 79.

Macrochloa tenacissima (Kth. en. I. 179. et suppl. 132.)

800'₁. URACHNE Trin.
(Walp. Ann. III. p. 727.)

1. URACHNE SPHACELATA Boiss. et Buhse (in N. Mém. de la Soc. des Natur. de Moscou. v. XII. p. 330):

Radice fibrosa dense caespitosa basi vaginis adpressis foliorum vetustorum obsita, foliis caespitum fasciculatis anguste linearibus supra scabris brevibus, culmis adscendentibus, foliis culmeis limbo brevi vagina longissima, ligula elongata lacera, panicula flexuosa triangulari-laxa, ramis 5—7 paucifloris brevibus, glumis aequalibus oblongo-lanceolatis acutis glabris 7-nerviis viridibus apice nigro-sphacelatis flosculo lanceolato subtriquetro superne et basi interna puberulo glumis tertia e gluma vix apice exserta.

In montibus inter Isfahan et Kaschan ad pagum Ssou.

Foliorum radicalium limbus 2—3 pollicaris. Culmi pedales et ultra, panicula 3—4 pollices longa glumae tres longae. Affinis U. holciformi a qua differt gluma dimidio minoribus apice sphacelatis, panicula brevi flexuosa, ramis paucispicatis. U. Soongarica differt glumis basi violaceis, flosculo fulvo.

801. ARISTIDA L.
(Walp. Ann. III. 738.)

1. ARISTIDA DIVULSA Ands. En. pl. in Galopagos p. 143; Eugen. Resa.

Panicula 4 — 6 poll., ramosa, pyramidali oblonga, ramis plurib. vel subsolitariis pluries divisis, longis; glumis cuspidato-aristatis subaequalibus; flosculo glabro, apice cum arista articulato, infra articulum bis torto, setis patenti-arcuatis subaequalibus media subsemipollicari.

Hab. locis maxime lapidosis reg. inf. ins. Chatham c. Setaria Antillarum aliisque. (Ipse.)

Ab Aristida subspicata, cui certissime propior, differt: panicula in ramis patentibus divulsa (unde nomen), flosculo demum infra aristam bis tantum torto laevi setisque minus scabris.

2. ARISTIDA CAUDATA Ands. l. c. p. 144

Panicula 4—5 pollic., spicatim condensata, b. interdum interrupta, ramis a b. spicatis, brevissimis; glumis cuspidato-acutatis, superiore ap. subbifida, flosculo pubescente, longius rostrato, cum arista articulato, infra aristam bis v. semel torto, setis patenti-divaricatis scabriusculis.

Habitat locis lapidoso-graminosis insulae Indefatigable (Ipse).

Aristidam nostram divulsam et compactam quodammodo conjungit.

3. ARISTIDA COMPACTA Ands. l. c. p. 145.

Panicula 3—4 pollic., spicatim contracta oblongo-cylindracea, ramis a b. spicatis brevissimis, divisis; glumis ap. erosis v. bifidis, aristatis, inferiore breviori; flosculo glabriusculo, apice c. arista articulato, infra aristam quater torto, setis divaricatis subaequalibus, media subunciali.

Hab. locis siccissimis admodum elevatis insulae Albemarle. (Ipse.)

4. ARISTIDA (ARTHRATHERUM) BRACHYPTERA Coss. et Balansa (Bull. de la Soc. bot. de France 1858 p. 169):

Rhizoma repens. Culmi 5—6 decimtr. alti, simplices vel ramosi, erecti, cylindrici praesertim sub nodis pubescentes. Folia convoluta, sensim attenuata et acuminata glabra, laevia; ligula brevis, truncata, fimbriata; vagina glabra, usque ad basin fissa. Panicula angusta, recta, rachi glabra sed scabra, ramis 3—6-verticillatis contractis, inaequalibus, scabris. Glumae subaequales, oblongo-lanceolatae, sensim acuminatae, inferior 1-nervia, scabra, superior obsolete 3-nervia. Palea inferior oblongo-lanceolata, glabra; aristae glumas longitudine aequantes, quarta parte inferiore iis obtecta, media fere omni plumosa sed parte superiore nudiuscula, laterales glabrae

scabrae, patentes, capillares. Palea superior ovali-oblonga, truncata, enervia, glabra, membranacea, forma et minutie squamaeformis; callus linearis, velutina sed dorso pilis, glumella inferiore quarta parte brevioribus obsitus. Lodiculae 2 oblongae, integrae, truncatae; apicem versus latiores paleamque superiorem fere aequantes. Antherae 3, lanceolatae, glabrae; ovarium oblongum, glabrum; styli 2 terminales; stigmata plumosa, stylis duplo longiora. Maj. ♃.

Hab. in arena mobili deserti Sahara algerici, inter Guerrara et Hadjira (Rebond) et ad El Abiod Sidi Cheikh (Cosson).

Ab affinibus vere diversa. Proxima est A. plumosae, a qua differt aristis multo brevioribus.

5. ARISTIDA CALYCINA R. Br. Prodr. p. 173. — Steud. Synops. 140. 2. Hook Fl. Nov. Zel. p. 293.

Hab. in Nova Zelandia: northern island bay of island. (A. Cunningham).

ARTHRATHERUM Palis.

(Aristidae sect. II. in Walp. Ann. III. 746.)

1. ARTHRATHERUM PUNGENS Beauv. Explor. sc. de l'Alg. II. p. 80.
Aristida pungens Desf. (Knth. en. I. 194 et supp. 150.)

2. ARTHRATHERUM CILIATUM Nees. Explor. sc. de l'Alg. II. p. 80.
Aristida ciliata Desf. (Knth. en. I. 195. et supp. 150.)

3. ARTHRATHERUM PLUMOSUM Explor. l. c. p. 81.
Aristida plumosa L. (Knth. en. I. p. 195 et supp. 150.)

4. ARTHRATHERUM OBTUSUM Explor. l. c. p. 82.
Stipagrostis obtusa Nees (Knth. en. I. 198 et supp. 151.)

Tribus V. AGROSTIDEAE Knth. Gr.

807. COLPODIUM Trin.

(Knth. en. I. 205. et suppl. p. 162.)

1. COLPODIUM PARVIFLORUM Boiss. et Buhse (in N. Mém. de la Soc. des Natur. de Moscou vol. XII. p. 227):

Radice fibrosa, culmis basi geniculatis humilibus, foliis radicalibus lineari-setaceis brevibus flexuosis striatis minute scabridis, culmis 1—2 latioribus laeviusculis, suprema vagina longa striata limbo brevissimo, ligula oblonga, paniculae triangularis ramis capillaribus patentibus inferioribus longis, spiculis bifloris, pedicello eis breviori suffultis, glumis albomembranaceis opacis ovatis subinaequalibus, flosculo tertia parte brevioribus superiori eroso denticulato glumellis inferne violaceis superne flavidis obtusis erosis subaequalibus.

In planitie Araxes prope Eriwan ad pagum Gamarlu, inter Araxes et Marand ad Ariandeli. In montibus Sahend.

Ab affini *C. bulboso* differt spiculis dimidio minoribus glumellis glabris nec sericeo-villosis.

808c. ECHINOPOGON P. Beauv.

(Cinnae L. sect. in Endl. gen. pl. 808 c.)

1. ECHINOPOGON OVATUS P. Beauv. (Agrost. p. 42. t. 9. f. 5.) — Steudel Synops. p. 182. Hook. f. Flor. Nov. Zel. p. 298. — *Agrostis ovata* Forst. — *Alopecurus barbatus* Banks et Sol.

Hab. in Nov. Zelandia: northern island, vulgaris (Banks et Sol.)

809. SPOROBOLUS R. Br.

(Walp. Ann. III. 753.)

1. SPOROBOLUS ARABICUS Boiss. diagn. XIII. p. 47.

S. perennis caespitosus glaucus, collo incrassato, foliis radicalibus congestis rigidis convolutis brevissimis pungentibus sed apice sub lente obtusis, caulinis paucissimis limbo brevissimo, serie pilorum brevium ligulae locum tenenti, culmo tenui erecto basi subgeniculato, panicula oblongo-pyramidata brevi, ramis pedicellisque brevibus, spiculis minimis laevibus glabris, glumis oblongis obtusiusculis inferiori plus dimidio breviori, glumellis aequilongis glumam interiorem subsuperantibus exteriori subtruncata.

Hab. in aridis Arabiae prope Mascate Aucher N. 5425.

Culmus in meo specimine 7—8 pollicaris, folia radicalia pollicaria, panicula sesquipollicem longa, spiculae illis formarum minorum Agrost. vulgaris minores. Sporobolo potius quam Agrostidi ob glumae et glumellae proportionem adjungenda est; inter Sporobolos laxifloros prope S. aeneum et junceum collocenda.

Calamagrostis rubella Boiss. in Kotschy pl. Pers. bor. 1846. Nr. 527 ex monte Elbrus a *C. Persica* Boiss. diagn. 7. specifice non differt.

2. SPOROBOLUS ELONGATUS Br. prodr. p. 170. Kunth Agr. p. 213. Hook. Fl. Nov. Zel. p. 295.

Vilfa elongata Steud. p. 159. N. 88.

Hab. in Nova Zelandia: northern island; Auckland (Sinclair).

3. SPOROBOLUS DIANDER Beauv. (Knth. agr. 213). Büse in pl. Jungh. III. p. 343.

Hab. ins. Javae et ins. Moluccanas.

β. *major*. Panicula per longa, coarctata, caeterum non diversa. — Java pr. Tjibogo, (Jungh.)

810. AGROSTIS L.

(Walp. Ann. III. 755.)

1. AGROSTIS ARVENSIS Ph. — Linn. XXIX. 87.

A. erecta; culmo gracili, 1—1½-pedali; internodio summo longissimo; foliis angustis, planis, ½—⅔ lin. latis, scabris; ligula brevi, ovata; panicula 2—3-pollicari, angusta, paupera; ramis setaceis, pedicellisque brevibus scabris; spiculis vix 1 lin. longis; glumis lanceolatis, inferiore carina denticulata, superiore glabra; flore ¾ glumarum aequante; palea inferiore ovata, subtruncata, plerumque mutica, superiore triente saltem minore; rarius in aristam glumam fere dimidio superantem desinente.

In arvis prope Concepcion legit cl. Gay et in herb. Chil. sub nomine Poa N. 226. reliquit. Differt ab A. glabra glumis vix 1 lin. longis, superiore haud denticulata; ab exasperata glumis minoribus, paleis saltem ¾ glumarum aequantibus, nec dimidio brevioribus, plerumque inermibus; ab A. magellanica panicula pauciflora, glumis brevibus, paleis fere omnibus inermibus, a Gayana iisdem notis.

2. AGROSTIS CHONOTICA Ph. l. c.

A. caespitosa culmis 9—12-pollicaribus, usque ad paniculam contractam spiciformem vaginatis, vaginis foliisque glaberrimis; foliis explanatis, inferioribus 6—7-pollicaribus, supremis circa 1½ poll. longis, lineam latis; panicula 2—2½-pollicari; glumis subaequalibus, 2¼ lin. longis, cuspidatis, fere aristatis, dorso glaberrimis; flore vix 1 lin. longo, glaberrimo; palea inferiore apice truncata, denticulata, inermi, superiore minima.

In litore archipelagi Chonos dicti legit cl. Fonk.

3. AGROSTIS CAMPESTRIS Ph. l. c.

A. caule elato, glaberrimo, fere usque ad paniculam foliato; vaginis supremis laevissimis; folio ultimo 5—6 lin. longo, 3 lin. lato, superius scabro; ligula abbre-

viata; panicula 6—9-pollicari, ovata, satis laxa; ramis numerosis, subsenis in quovis verticillo, scabris, erectis; pedicellis spiculis $1\frac{1}{4}$ lin. longis brevioribus; glumis subaequalibus, e viridi, violaceo et fulvo pictis, laevibus, praeter nervum medianum glumae inferioris; flore unico, $\frac{2}{3}$—$\frac{3}{4}$ glumarum aequante; palea inferiore lanceolata, hyalina, mutica; superiore dimidium inferioris aequante.

In insula Chiloë, locis cultis, invenit cl. Dr. Fonk. — Differt ab *A. glabra* Kth. ligula brevi, ramis verticillorum paniculae numerosioribus, spiculis minoribus, pallidis, palea superiore majore.

4. AGROSTIS PATAGONICA Ph. l. c.

A. erecta, 2—3-pedalis; culmo laevi, plurinodo, fere usque ad apicem foliato; vaginis glabris; foliis culmeis utrinque scaberrimis; $2\frac{1}{2}$ lin. latis; ligula obliqua 2 lin. longa; panicula 8-pollicari, densa, cernua; ramis denis pluribusve in verticillis inferioribus, valde inaequalibus; pedicellis capillaribus, spiculas subaequantibus, scabris; glumis $1\frac{1}{2}$ lin. longis, ovatis, acutis, carinatis, in carina ciliolato-scabris; palea inferiore vix dimidiam glumam aequante, ovata, quinquenervi, arista brevi terminata; superiore dimidio breviore; callo glabro.

Ex expeditione sua ad lacum Nahuelhuapi retulit cl. Dr. Fonk. — Differt ab A. glabra panicula densa, palea vix dimidium glumae aequante, plerumque distincte aristata.

5. AGROSTIS LASIANTHA Ph. l. c.

A. annua; culmis debilibus, fere filiformibus, 8 poll. longis, usque ad paniculam foliatis; foliis $\frac{1}{2}$ lin. latis, una cum vaginis glabris, laevibus; ligula elongata, lacera; panicula elongata, contracta, laxa, pauciflora; ramis geminis, capillaribus, ultra medium nudis; spiculis hyalinis, nervis glumarum modo viridibus; glumis 1 lin. longis, subaequalibus, lanceolatis, cuspidatis, uninerviis, nervo serrato scabro; flosculo dimidiam glumam aequante; palea inferiore ovata, apice subquadridentata, dense hirsuta, dorso aristata; arista paleam fere bis aequante; palea superiore inferiorem subaequante.

In umbrosis provinciae Valdiviae habitat.

6. AGROSTIS? ASPERULA Ph. l. c.

A. caespitosa, laete viridis; culmis strictis, gracilibus, 1—$1\frac{1}{2}$-pedalibus, scabris; foliis brevibus, asperulis, caulinis 18 lin. longis, 1 lin. latis; vaginis pubescentibus ligula modice elongata, 1 lin. longa, rotundata; paniculae $2\frac{1}{2}$—3 poll. longae, contractae, spiciformis, ramulis brevissimis, nullo longiore quam 6 lin., appressis; pedicellis 1—$1\frac{1}{2}$ lin. longis; glumis bifloris, lanceolatis, acuminatis, subaequalibus 2 lin. longis, carinatis, scabris, hyalinis, carina laete viridi; superiore trinervia, nervis lateralibus abbreviatis, trinerviis; floribus gluma brevioribus; palea inferiore enervia, coriacea, obtusa, dorso rotundata, versus apicem violacea, margine hyalino terminata, marginibus involutis; palea superiore paullo breviore, dorso lato, plano, carinis viridibus, valde prominentibus; flore secundo pedicellato, sterili, inferiore dimidio minore; pedicello piloso; caryopsi paleis inclusa, oblongo-cylindracea, in ventre longitudinaliter bisulcata, stigmatibus sessilibus coronata.

In pascuis prov. Valdiviae legi, ni fallor loco los Pantanos praedii mei. — Floribus duobus spiculae ab Agrostide recedit, cujus habitum habet.

7. AGROSTIS (BROMIDIUM) KOELERIOIDES Em. Desv. Gram. Chil. in Gay Fl. chil. t. VI. p. 317. t. 77. f. 2:

A. annua, caespitosa, humilis; culmis filiformibus; vagina summa ventricosa; ligula ovata; foliis brevibus; planis vel convolutis; panicula 6—8 lin. longa, spiciformi; spiculis 1-floris, $1\frac{1}{4}$ lin. longis; glumis lanceolato-acuminatis, carina scaberrimis, florem 1-paleaceum fere duplo superantibus; callo piloso; palea lanceolato-elongata, 4-nervia, apice truncata et 4-seta, setis mediis brevibus, lateralibus palea dimidio brevioribus, supra basin aristam contortam, geniculatam, $1\frac{1}{2}$-linealem gerente; antheris 3, subquadrangularibus, apice profunde bilobis, mitraeformibus. — A. anomala Trin. in Linnaea X. p. 301. (1835) et in Hb. Mus. Paris. Steud. Synops. p. 222 n. 52.

Koeleria chilensis Steud. et Hochst. in Herb. Monac., Un. it., Bertero n. 357 et 1069. Id. in Hb. Webb. — Bromidium Koelerioides Em. Desv. mss in Hb. Berol.

Hab. in pascuis arenosis regni Chilensis: Tuilloia. Montis La Leomi Rancagua (Bertero n. 357 et 1069), Valdivia (Cl. Gay), Concon et Santa Rosa (Poeppig.)

8. AGROSTIS (PODAGROSTIS) SESQUIFLORA Em Desv. Gram. Chil. in Gay: Flor. chil t. VI. p. 318. t. 77. f. 8.

A. annua, caespitosa, pedalis; culmis erectis, filiformibus; f. 2—3-pollicaribus, breviusculis, longe acuminatis; ligula ovata, apice denticulato-lacera; panicula 2—3-pollicari, anguste contracta, violacea: ramis ad summum 1½-pollicaribus, paucifloris, apice tantum spiculigeris, pedicellisque denticulato-scabris; spicula 1—1¼ lin. longa, subsesquiflora; pedicello floris secundi minimo; glumis subaequalibus, lanceolatis, laevibus; callo glabro; palea inferiore ovato-elongata, albida, 5-nervia, apice truncata, non denticulata, glumas subaequante; inferiore ⅓ vel ¼ breviore, binervis, elongata, truncata; caryopside lutescente, ½ lin. longa.

Hab. in Chili, Antuco (C. Gay). Vicina est A. aequivalvis Trin., quae differt rudimento fl. secundi medium primi aequante.

9. AGROSTIS (TRICHODIUM) GAYANA Em. Desv. Gram. Chil. in Gay Flor. chil. t. VI. p. 313.

A. repens, rhizomate squamis purpurascentibus tecto; culmis 8—9-pollicaribus, usque ad apicem foliatis; foliis planis, asperis; ligula elongata; panicula 4-pollicari, laxa; erecta, ramis ultra medium spiculigeris; pedicellis scabris, glumis brevioribus v. subaequalibus; spiculis viridi-violaceis, subfasciculatis, 1½—1¾ lin. longis; glumis lanceolatis, carina scabris; callo utrinque piloso; palea inferiore glumis ⅓ breviore, elongata, subcylindracea, truncata, apice 4-mucronulata; arista brevissima, subapicali; palea superiore minima; antheris linearibus, ¾ lin. longis.

Hab. in Chile (Gay).

Affinis est A. magellanica, differt autem rhizomate, flore, arista et antheris.

10. AGROSTIS (TRICHODIUM) UMBELLATA Colla, in pl. Berteroan. fasc. V. p. 23. sive Mem. Ac. Sc. Torin. XXXIX. p. 23. 1833.

A. caespitosa, 1—2-pedalis; culmis omnibus fertilibus, strictis, laevibus, foliis anguste linearibus, utrinque scabris; ligula oblonga, acuta; panicula laxissima, 3—4 poll. longa, 2—3 poll. lata; ramis setaceis, divaricato-patulis, inferne 3—5-verticillatis, ter quaterque di-trichotome ramosis; pedicellis scabris, capillaribus, 4—12 lin. longis; spiculis 1½—2 lin. longis; glumis lanceolato-acuminatis, acutis, praeter carinam laevibus; callo breviter piloso; flore glumis fere dimidio breviore, ovato-elongato; palea inferiore 5-nervia, apice truncata et denticulata, superficie scabriuscula, dorso paulo infra summum aristata; arista recta, brevi v. glumas paulo superante; palea superiore brevissima. — Em. Desv. Gram. chil. in Gay Fl. Chil. t. VI. p. 314. — A. chilensis Kunze in Poeppig Coll. Chil. III. 21. Trin. in Linnaea t. X. p. 302 (1835) et in Agrost. in Act. petrop. A. patens Trin. Agrost. in Act. petrop. sér. VI. nat. t. IV. Bot. p. 322, ex specimine Berteroano! (1841). — A. stricta Trin. Agr. l. c. p. 342 ex spec. Berteroan. ejusdem loci, excl. synon. (1841). — A. glabra Hochst. (non Presl.) Mss. in Unio Itinerarum (1835) ex spec. Berteroan. n. 556 in Hb. Webb.

Hab. Rancagua (Bertero. n. 31 et 556), Antuco (Poeppig), regni Chil. Em. Desv.

11. AGROSTIS (TRICHODIUM) LEPTOTRICHA Em. Desv. Gram. chil. in Gay Fl. chil. t. VI. p. 316. tab. 76 f. 1.

A. annua, elata, pulcherrima, caespitosa; foliis utrinque scabris, planis, siccitate convolutis; ligula oblonga, apice lacera; panicula 4—6-pollicari, laxissima; ramis longissimis, tenuissime capillaribus, ter quaterque dichotome v. trichotome ramosis, nutantibus, non divaricatis; inferioribus 5—8 verticillatis; pedicellis 3—10 lin longis; glumis subaequalibus, ¾ lin. longis, ovato-lanceolatis, carina denticulato-scabris callo breviter piloso; palea inferiore glumis paulo breviore mutica, dorso convexa, 5-nervia,

nervo medio ante apicem evanescente, apice truncata et 4-mucronulata; palea inf. minima, rotundata.

Hab. Valdivia et Osorno regn. Chil. (Gay, Bridges).

Valde affinis est A. montevidensi Spr. sed abunde differt arista, callo, glumis etc.

12. AGROSTIS ADSCENDENS Lange (exs. et mscpt. 1851. pug. I. p. 33):

Caespitosa, ½—1-pedalis, culmis adscentenitibus folia canaliculata, apice setaceo-convoluta, ligula elongata demum fissa, dorso breviter et dense pubescens; panicula 1—2 pollicaris, glumae violaceo-tinctae punctis saturatioribus scabrae, flosculus fere longitudine glumarum, palea inferior apice vix denticulata, superiori duplo longior. — Habitus fere Polygonis littoralis. — Willk. et Lge. Prodr. fl. hisp. I. p. 52.

Hab. ad fossas subsalsas prope Olmedo Cast. vet. (Lange) atque pr. Vich. Catal. (Csta.).

A. scabriglumis differt: Planta repens, 2—3-pedalis culmis erectis, folia plana, ligula glabra, panicula semipedalis flosculus glumis tertia parte brevior, palea inferior superiori triplo longior.

13. AGROSTIS MARITIMA Lmk. (Dict. I. 61):

Stolonifera, culmis strictis rigidis ½—1′ l. basi vaginatis, foliis brevibus patentissimis complicatis rigidis glaucis, panicula contracta thyrsoidea compacta flavescente, glumis acutis laevibus, paleis inaequalibus muticis. — Rchb. ic. f. 1436. — Willk. et Lge. Prodr. fl. hisp. I. p. 52. — Agr. alba γ. maritima Godr. Vilfa maritima. PB.

β. *Clementii* Willk. (Prodr. fl. Hisp.): „Culmus teres fere tripedalis; folia involuta teretia pagina superiore glaberrima, ligula lacera; panicula bipollicaris et ultra decomposita spicaeformis subcylindrica lobata: flores mutici." Clem. An sp. distincta?

γ. *Pseudopungens* Lange Pug. I. pag. 31. — Willk. et Lge. l. c.: pumila, rhizomate longe repente et radicante; culmi diffusi v. adcendentes ramosi 2—6" l. internodiis abbreviatis; folia convoluto-subulata subpungentia, infima vaginis amplis striatis praedita. Panicula ½—1" l. — Habitu Sporoboli pungenti haud dissimilis.

Hab. in sabulosis maritimis Hispaniae passim β. circa Pto. de Sta. Maria, Clem. γ. ad litt. Galleciae boreal. pr. Doninnos, Lge.

14. AGROSTIS VULGARIS var. FRONDOSA Lange (Pugill. I. p. 32. exs. n. 32. Willk. et Lge. Prodr. Fl. hisp. I. p. 53.)

Culmi inde a basi ramosi, ramis numerosis, fasciculato-congestis, internodiis brevissimis; foliorum vaginae amplae, laminae horizontaliter divergentes, setaceo-convolutae et apice subpungentes; panicula sub anthesi contracta, post anthesin patula; paleae variant in uno eodemque specimine mutica et arista geniculata basali, glumarum fere longitudine praedita. — Hab. Sporoboli pungentis. — *A. frondosa* Ten.? Trin. ic. I. t. 32. fig. D.?

Hab. in Galleciae montanae et maritimae ericetis frequentissima.

Planta hic commemorata praeter characteres indicatos habitu singulari, ab A. vulgari typica prorsus aliena distinguitur, quare forsan specifice seperanda. Haud male convenit cum A. frondosae Ten. descriptione, ad quam ideo ad interim retuli sed an recte, ex icone Triniana haud bona vix dijudicari potest. Si nova *A. scoparia* forsan appellanda.

15. AGROSTIS SETACEA Curt.

A. biflora Lge. (Willk. et Lge. Prodr. Fl. hisp. I. p. 54. Cf. Lge. pugill. I. pag. 34):

Spiculae biflorae utroque flore aristato. Ceterum cum forma typica convenit.

Hab. in Galleciae monte Pico Sagro pr. Santiago (Lge.)

16. AGROSTIS NEBULOSA Boiss. et Reut. (diagn. 26):

Multiculmis, culmis 1—1½′ l. teneris, foliis planis, ligula oblonga acuta lacera, paniculae amplae verticillato-ramosissimae ramulis scaberrimis, pedicellis laevibus, spiculis minutis pallidis, glumis lanceolatis obtusiusculis glabris, paleis subaequalibus

glumis quadruplo brevioribus, inferiore mutica v. (rarius) a basi aristata. — Sec. Willk. et Lge. Prodr. Fl. hisp. I. p. 51.

Hab. in Hispania in collibus arenosis et gypsaceis utriusque Castiliae (c. Rivas, S. Pablo los montes, in valle Ambles pr. Avila, Reut Olmedo, Lge.) et Baeticae (la Carlota, Schousb.) passim. ☉. Jul.

17. **AGROSTIS CASTELLANA** Boiss. et Reut. (D'agn, 26.):

Caespitosa, culmis $1\frac{1}{2}$—$2\frac{1}{2}$' l. erectis, gracilibus, foliis planis angustis (siccis convolutis saepe filiformibus) glaucescentibus, ligula alba sublacera, paniculae $\frac{1}{4}$—$\frac{3}{4}$' l. angustae laxae ramis semiverticillatis valde inaequalibus pedicellisque scabris, glumis acutis laevibus pallide virentibus, paleas valde inaequales basi breviter penicillatas superantibus, palea inferiore apice bisetosa supra basin aristam externam valde geniculatam gerente, rarius mutica. — Lge et Willk. Prodr. fl. hisp. I. p. 53.

Abundat in collibus arenosis et dumosis regionis inferior. et montanae Hispaniae: Castellae novae (v. c. pr. Chamartin, Casa del Campo, Guadarrama, Reut., Escorial, Lge.) regni Legion. (c. Bena venta, Villafranca del Viergo, Lge). ♃. Jun. Jul.

18. **AGROSTIS NEVADENSIS** Boiss. El. p. 61. — Steud. Synops. p. 168.

β. *minor* Boiss. Voy. II. 616. Culmi 2—3" l. panicula contracta. — Willk. et Lge. Prodr. fl. hisp. I. p. 54.

Hab. β. in regione nivali ad summas usque ad 9—11000'.

Cacumina Hispaniae (Borreguiles, Boiss., Mulahacen, Willk.). Provenit etiam in reg. alp. Asturiae. — ♃. Jul. — Sept.

19. **AGROSTIS REUTERI** Boiss. (Voy. II. 645): stolonifera, culmis $1\frac{1}{2}$—$2\frac{1}{2}$' l., foliis planis, ligula oblonga, lacera, paniculae amplae patentissimae ramis verticillatis pedunculisque laeviusculis, glumis violaceis acutis glabris, paleis subinaequalibus truncato-denticulatis muticis, glumis demum patentissimis plus dimidio brevioribus. — Ex Willk. et Lge. Prodr. fl. hisp. I. p. 52. — A. capillaris Desf. fl. atl. non L.; A. alba Kz. Chlor. n. 256. non L.

Hab. in Hispania locis herbidis et arenosis humidis regionis inferioris et montanae in regno Grenat, (p. Estepona, *Hs. Prol.*, Malaga *Bss.*, *Reut.*, Sierra Nevada in collibus ad 3500', *Wk.*) Baetica (pr. Gades, *Bss.*) atque Estremadura (Badajoz, *Schousb.*) — ♃. Jun. — Aug. „Beus." — Etiam in Algeria.

20. **AGROSTIS TRUNCATULA** Parl. fl. ital. — Willk. et Lge. Prodr. fl. hisp. I. p. 55. — A. capillaris Boiss. et Lge. non L.)

Hab. in pascuis locisque incultis regionis montanae Hispaniae borealis et australis in Gallecia frequentissima (*Lge.*), per regnum Legion. (Pto. de Manzanal, Villafranca del Viergo. (*Lge*) et Castell. vet. (Medina di Rioseco, *Lge.*) haud raro, in Sierra di Guadarrama (supra Chozas, *Bourg.*) ☉. Jul. — Aug.

21. **AGROSTIS CANINA** L. — Steud. Synops. p. 162.

α. *genuina* Godr. Fl. fr. III. p. 484. Folia viridia.

β. *glauca* Godr. l. c. Folia glauca (A. vinealis Desv.)

γ. *humilis* Willk. Culmi 3—4" l., panicula contracta et condensata (A. gallecica Lag. in herb. Bout.) — Willk. et Lge. Prodr. Fl. hisp. I. p. 54.

Hab. etiam in Hispania γ) in Astur. reg. alpina. (Pico de Arvas, Lag.)

22. **AGROSTIS SINAICA** Boiss.

— Boiss. diagn. XIII. p. 46. —

A. perennis glabra glaucescens, collo subnodoso, culmo erecto simplici elato, foliis rigidulis erectis linearibus setaceo-acuminatis siccitate convolutis multistriatis, ligula oblonga brevi truncata, panicula erecta contracta oblongo-lineari albida ramulis pedicellisque strictis abbreviatis scabridis, glumis aequalibus acutiusculis mucronulatis undique sed ad carinam longius scabridis flosculo mutico sesquilongioribus, glumellis glabris exteriori oblonga acutiuscula interiori paulo breviori subtruncata.

Hab. ad aquas jugi Sinaitici Bové, pl. exs. et in Decaisne. Flor. Sin. No. 41 sub *A. maritima*.

Culmi bipedales, panicula tripollicaris angusta, habitus *A. stoloniferae* a qua glumis undique nec carina tantum scabris, glumella inferiori acuta nec truncata statim dignoscitur. *A. stolonifera* quae glumas quoque hirtulas habet differt radice annua, culmis decumbentibus, ligula fimbriata, foliis planis non rigidis etc. *A. Schimperiana* Hochst., planta Abyssinica cui *A. Simensis* ejusdem regionis ut varietas aristata adjungenda est et quae quoque glumis hirtis gaudet differt glumella calyce vix breviori, foliis teneris planis.

23. AGROSTI BYZANTINA Boiss.

— Boiss. diagn. XIII. p. 46. —

A. annua? glabra, radice fibrosa subpraemorsa, culmis ascendentibus dein erectis foliosis, foliis brevibus vaginis striatis limbo a basi anguste lineari-lanceolato subulato multinervi superne et marginibus scabro, ligula brevi ovato-subtruncata, panicula erecta valde contracta anguste lineari-elongata virenti ramis 2—3 verticillatis capillaribus strictissimis scabris, pedicellis scabridis apice incrassatis spicula parum longioribus, glumis lanceolatis acutis aequalibus subcarinatis dorso virescentibus obscureque uninerviis caeterum hyalinis carinae apice scabriusculis caeterum laevibus, flosculo glaberrimo mutico, palea inferiori gluma saltem tertia parte minori basi virenti caeterum hyalina apice obtusa minutissime denticulata, superiori hyalina plus dimidio minori apice obtuse bidentata.

Hab. prope Byzantium Noë 1844 sub No. 225.

Planta pedalis, panicula 3—4 pollicaris angustissima, spiculae magnitudinis earum *A. caninae* a qua caeteris neglectis panicula contractiori, flosculis muticis bipaleaceis differt. Propius affinis *A. Castellanae* Boiss. et Reut. quae eadem ac *A. effusa* Spreng. (nomen omnino improprium) esse videtur et quae quoque panicula contracta insignis longe differt glumis majoribus acutioribus, flosculis basi hirsutis etc.

24. AGROSTIS (TRICHODIUM) INFIRMA Büse.

Büse in pl. Jungh. III. p. 342.

Paniculae pyramidalis ramis ut et glumarum carinis hispido-scabris, glumella infera mutica, supera subnulla, f. radicalib. setaceis strictis, culmis linearib. scabris, ligula producta saepius incisa, radice fibrosa. —

Hab. ins. Javam in paludosis pr. pagum Parékesit in planitie montis Diëng. alt. 6200'. (Jungh.)

Biped., tenera, valde affinis A. (Trichodio) caninae. Ab huj. varietate s. forma mutica distinguenda est, praeter radicem, paniculae teneritate, et pedicellis longis. —

25. AGROSTIS (TRICHODIUM) STRICTA Büse.

Büse in pl. Jungh. III. p. 341.

Panic. lanceolatae ram. laeviusculis, spiculis majusculis, glumis carina hispidulis, glumella infera e dorso brevit. aristata supera subnulla, f. glabris, radicalib. linearib. strictis, culmeis latiorib., supremo paniculae propinquo, ligula producta.

Bipedalis.

β. *remota:* f. radicalib. subinvolutis, culmeo supremo a panicula paullum effusa remoto.

Hab ins. Javae, una cum varietate β in planitie centr. cacuminis Mont. Mandala wangi, alt. 2900. (Jungh.)

26. A. BILLARDIERI Br. Prodr. — Steud. Synops. p. 174. — *Deyeuxia* Kunth, Agrost. p. 244. Hook. fil. Fl. Nov. Zel. p. 298. — *Lachnagrostis* Trin.

Hab. in Nov. Zelandia: northern island (Banks et Soland.) bay of islands, Auckland et east coast copiose (Sinclair, Colenso etc.)

27. AGROSTIS QUADRISETA Br. — Steud. Synops. p. 172. Hook. Fl. Nov. Zeland. p 296. *Avena* Labill. *Bromidium* Nees.

Hab. in Nova Zelandia: northern island; Auckland, Bay of islands etc. (Cunningham etc.

28. AGROSTIS (TRICHODIUM) PARVIFLORA Br. Prodr. p. 170. Hook. fl. Nov. Zel. p. 296. — *Vilfa* Steud. Synops. p. 162.

β. *perpusilla*; muscoidea, culmis brevissimis, caespitosis, foliosis, foliis confertis setaceis ½-uncialibus, recurvis, panicula foliis immersa pauciflora, arista nulla, palea superiore nulla. Hook. l. c.

Hab. in Nova Zelandia: northern island; east coast, Cooks Straits etc. (Colenso) β. in cacumine montis Ruahine (Colenso).

29. AGROSTIS LYALLII Hook. fil. (Fl. Nov. Zel. p. 297): gracillima, glaberrima, foliis setaceo-involutis, panicula capillari-effusa pauciflora, ramis primariis ternis elongatis trichotomis, pedicellis divaricatis, glumis aequalibus ovato-lanceolatis acutis dorso scaberulis, flore ⅓ longioribus, palea inferiore sericea membranacea truncata apice erosa, dorso ad medium aristata, arista palea duplo longiore, palea superiore hyalina nervis inconspicuis acuta v. breviter bifida, stylis basi remotis.

Hab. in Nova Zelandia: middle island; Milford Sound (Lyall).

Species elegans. Culmi caespitosi, 8—2 poll. alti, inferne ramosi, glaberrimi. Panicula ampla ramis et spiculis paucis; rachis flexuosa; rami ternati in ramulis ternis capillaribus flexuosis divisi. Spiculae parvae ⅙ poll. longae. Glumae aequales, flosculo sessili membranaceo fere tertia parte longiores.

Planta Airae caryophylleae subsimilis.

30 AGROSTIS CONTRACTA F. Muell. (in Hook. f. Fl. Tasman. 2 p. 116: tab. 161. A.). culmis gracilibus elongatis, foliis planis vaginisque scaberulis, panicula elongata contracta, ramis brevibus verticillatis 5—6-floris, glumis oblongo-lanceolatis acutis enerviis flosculum aequantibus, palea inferiore acuta mutica enervi coriacea scaberula basi subbarbata superiore aequilonga, setula brevi.

Hab. locis lapidosis Tasmaniae: South Huon River (Oldfield) et in alpibus Victoriae in Nova Hollandia.

Gramen gracile, 2-pedale. Panicula 3—5-policaris. Spiculae viridulae.

31. AGROSTIS STOLONIFERA L. α) *vulgaris*: valvis acutis virentibus Rchb. fig. 1430. — β) *varia*: valvis acuminatis coloratis. — γ) *tenuis*: panicula contracta; valvis flore longioribus acutis, dorso scabriusculis; foliis linearibus planis, utrinque marginibusque scabris. *A. coarctata* Hoffm.? Rchb. 1431. — δ) *Gaudini*; panicula ramosissima; palea inferiore sub medio saepe (non semper) aristata, arista recta paleam parum tantum superante. — ε) *Rothii*: panicula ramosissima patente; ramis strictis rigidis; valvis apice mucronatis dorso scabris, flore longioribus; palea inferiore obtusa aut crenulata, mucrone terminata; foliis elongatis rigidis, late linearibus planis acuminatis, utrumque marginibusque scabris. *A. gigantea* Roth. Rchb. 1433. — ζ) *vaginata*: culmus ad nodos inf. geniculatis, erectis, ad paniculam usque foliosis; foliis omnibus linearibus glabriusculis; panicula densa, conferta, ramosissima, valvis obtusiusculis.

32. AGROSTIS ALBA L. — Explor. scient. de l'Alger. phaner. p. 63.

Var. α. *coarctata* — *Agr. alba* L.

Var. β. *vulgaris* — *Agr. vulgaris* (Knth. en.)

Var. γ. *Fontanesii* — *Agr. capillaris* Desf. (*Agr. Reuteri* Boiss.)

34. AGROSTIS CANINA Linn. — Steud. Synops. Hook. Fl. Nov. Zel. p. 296.

Var. *stolonifera*: stolonibus brevioribus longioribusve.

Var. *montana*: radice stolonifera, culmis caespitosis rigidis, panicula densiori.

Var. *mutica*: paleis muticis.

Var. *pumila*: culmis brevibus, apiculis ustilagine infectatis.

Omnia ex Blytt Norges Fl. I. p. 81.

APERA Adans.

(Endl. gen. pl. p. 810. b.)

1. APERA ARUNDINACEA Hook. fil. (Fl. Nov. Zel. p. 295. tab. 67):
Glaberrima, laevis, rhizomate repente, culmis basi squamatis elongatis gracilibus strictis rigidis tenacissimis simplicibus v. ad nodos remotos ramosis foliosis, foliis superne scaberulis involutis coriaceis vaginis elongatis, panicula elongata ramis capillaribus primariis verticillatis, spiculis parvis pallidis, glumis setaceo-acuminatis superiore obscure 3-nervi, carinis scaberulis, flore breviter stipitato callo glaberrimo, palea inferiore coriacea involuta nervis obscuris apice scaberula obtusa incrassata aristata, arista caduca terminali scabra glumis duplo longiore, superiore paulo breviore bidentata, squamulis 2 basi connatis, stamine 1, anthera brevi.
Hab. in Nova Zelandia: northern et middle island; Cape Turnagain (Colenso); Akaroa (Raoul). Incolis: Hunangamoho (Col.).
Descript. l. c. vide.

GASTRIDIUM Palis.

(Endl. gen. pl. n. 811.)

1. GASTRIDIUM LAXUM Boiss. et Reut. (pug. 126).
Differt a *Gastridio lendigero* Gaud. culmis humilioribus (5—8" l.) ligula oblonga, paniculae oblongae ramis nitidis erecto-patentibus vix thyrsum formantibus, spiculis duplo minoribus, glumis nitidissimis ad carinam vix scabris, arista gracili paululum exserta. — Ex Willk. et Lge Prodr. fl. hisp. I. p. 57.
Hab. circa Gades. Hispaniae, Cabr. — ⊙

Ic. add.

2. GASTRIDIUM TRIARISTATUM Dur. (Walp. Ann. I. 928. n. 1.)
Explorat. scientif. de l'Algérie tab. 40. n. 1.

3. GASTRIDIUM LENDIGERUM Gaud.
Explorat. scientif. de l'Algérie tab. 40. n. 2.

4. GASTIDRIUM SCABRUM Presl.
Explorat. scientif. de l'Algérie tab. 40. n. 3.
(Gastrid. muticum Guenth. in Spreng. phaner. p. 67.)

813. POLYPOGON Desf. Atl. I.

(Knth. en. pl. I. 232. — Walp. Ann. I. 928.)

1. POLYPOGON LITORALIS Sm. Comp. fl. brit. 13. (P. elongatus Lng. n. gen. sp.; P. Lagascae R. S.; Agrostis litoralis SM., Agr. lutosa Poir.)
β. *brevisatus* Lge. (Pugill. I. p. 35): Forma typica omnibus partibus minor, folia angustiora in statu sicco setaceo-involuta, papillis brevissimis dense obtecta indeque glauca; glumae breviter aristatae; palea inferior truncata 4-nervis et breviter 4-dentata, omnino mutica v. rarius supra medium brevissime aristata. Forsan distincta species. — Willk. et Lge Prodr. fl. hisp. I. p. 57.
Hab. in fossis salsis exsiccatis pr. Olimedo Cast. vet. Lge.

2. POLYPOGON LINEARIS Trin. in Linnaea 1835. X. p. 301. Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 300. tab. 77. f. 1.
P. longiflorus Nees ab Esenb. in Act. petrop. ser. VI. nat. t. III.; Brt. p. 268. — P. affinis mss. in Unio itin. (sec. Breng.) ex pl. Berter. n. 273, in herb Monac.!
Hab. Tagua-Tagua (Bertero, n. 273), Concon (Poeppig), Valparaiso (Cumming sec. Trin. l. c.) regni Chili Desv.

3. POLYPOGON INTERRUPTUS H. B. Kunth. Nov. Gen. I. 134. t. 44.

Var. α. *longearistata*. Aristis 1⅔—2¼ lin. longis glumas superantibus; spiculis 1—1¼ lin. longis; vagina summa non ventricosa. — Em. Desv. Gram. Chil. in Gay flora chil. t. VI. p. 298.

Var. β. *breviaristata*. Panicula crassiore; aristis spicula vix ¾ lineali brevioribus; vagina summa ventricoso-inflata. — Em. Desv l. c.

Hab. var. α. Santiago (Gay); Valparaiso (Meyen); Rancagua (Bertero, n. 566); Quillota (Bertero, n. 1256). — Var. β. Santiago (Gay).

Tribus VI. ARUNDINACEAE Knth. Gr.

817. CALAMAGROSTIS Adans.

(Walp. Ann. III 756.)

1. CALAMAGROSTIS CHILENSIS Ph. — Lin. XXIX. 89.

C. foliis fasciculorum sterilium 9—10 pollic. longis, erectis, convolutis, laevibus superius glabris, basi vaginarumque ore pilosis; culmis erectis, bipedalibus, gracilibus, basi ramosis, superius nudis; foliis culmeis omnino glabris; ligula satis longa truncata; panicula 4½-pollicari, subsecunda, contracta; ramis quaternis quinisve, majoribus 1½ pollic. longis; pedicellis capillaribus, spiculas subaequantibus, scabris; glumis 2½ lin. longis, aequalibus, fuscis, lanceolatis, carinatis, glabris, in carina scaberulis; superiore trinervi; pilis gluma brevioribus, flosculo longioribus; paleis membranaceis, hyalinis, inferiore 1¼ lin. longa, ovata, hyalina, mutica; superiore tertio breviore.

Specimen a cl. Gay prope thermas Cauqueres lectum in herb. Chil. exstat. — Stamina nulla invenire possum; an species dioica?

2. CALAMAGROSTIS STRIGOSA Hartmann. Skand. Fl. ed. IV. p. 26. vix Steud. Synops. p. 189. n. 34. sed Arundo strigosa Wbg. fl. lapp. n. 47. — Blytt Norges Flora I. p. 86.

Hab. in Scandinavia.

3. CALAMAGROSTIS GRACILESCENS Blytt (Norges Fl. I. p. 88).

Rhizoma horizontaliter repens, stolonibus paucis praeditum. Culmi steriles foliiferi, erecti; fertiles graciles, 4-nodosi, 2 — 3-pedales, sub inflorescentia hispiduli. Vaginae internodiis breviores; ligula brevis summa vix 1½ lineam longa, truncata fissa vel lacera. Folia in culmeis sterilibus fere setacea glabra vel apicem fere pungentem versus parum scabridula. Folia in culmis fertilibus ½ — 1 lineam lata, longissime acuminata, scabra. Panicula 3—4-uncialis, obscure purpurea, erecta, sub anthesi aperta, lanceolata, demum contracta, paleis apertis. Rachis scabra. Rami 8-verticillati, in ramulis 3—6 scabros, inaequales divisi. Glumae parum inaequales anguste lanceolatae acutae, carina scabridulae, post anthesin apertae (non divaricatae) Palea pilis sublongiores, tenuiter membranaceae, pallidae nervibus purpureis, inferior ovata, apice tenuiter denticulata. Arista ex medio dorso paleae eaque brevior. — ♃. Juli.*)

Hab. in pratis uliginosis prope Christianiam.

4. CALAMAGROSTIS HALLERIANA Dc. — Steud. Synops. p. 187.

Arundo Pseudophragmites Schrad. Fl. germ. p. 213.

Calmagrostis Pseudophragmites (Link) Rchb. Fl. germ. exc. I. p. 26. Blytt Norges Fl. I. p. 89.

C. robusta Blytt l, c. Culmis 4—5-pedalibus, 6-nodosis, vaginis scabridulis, foliis 3—4 lineas latis, panicula 8—10-unciali plus minus nutante, glumis inaequalibus acutissimis.

*) C. Halleriana And. Gram. Scand. p. 85. (p. p.); C. Halleriana β. mutica Fr. H. N.; C. Halleriana β. gracilescens Hn. Skand. Fl. p. 298.

C. pallida Blytt l. c Culmis plus minus ramosis, 6-nodosis, 3—4-pedalibus; vaginis scabris; foliis 2—3 lineas latis; panicula 4—5-pollicaris, rigida, erecta, cinereo-purpurascente.

C. glaucescens Bl. l. c. Glaucescens, foliis 2—4 lin. latis, panicula erecta 4—6-pollicaris, sub anthesi late ovata.

C. rariflora Bl. l. c. Culmis simplicibus vel e basi ramosis, 5—6-nodosis, 2—2½-pedalibus, sat gracilibus, vaginis laevibus, panicula 3—4-pollicaris, purpurea, angusta, laxiuscula, ramis brevibus, glumis sat angustis et acutis; aristo subapicali. — C. phragmitoides β. minor And. H. N. XIV. 90.

C. densiflora (C. latifolia densiflora Bl.). Panicula laxiuscula v. omnino erecta colorata, ramis terminalibus verticillatis.

Hab. in Norvegia.

5. CALAMAGROSTIS RUBICUNDA Blytt Norges Fl. I. p. 91.

Rhizoma plus minus elongatum, repens. Culmi solitarii vel plures simplices v. ramosi, 5-nodosi, 2—3-pedales laeves apicem versus compressi. Vaginae scabriusculae internodia fere aequantes, suprema excepta, quae vulgo internodio 2—3 poll. brevior. Ligulae elongatae, truncatae, fissae et lacerae, summae culmum amplectentes et usque ad 4 lineas longae. Folia sterilia angusta et convoluta, culmea plana, rigida, 3—4 lin. lata, lineari-lanceolata longe acuminata, supra et marg. scabra. Panicula erecta, rigidiuscula, 4—6 pollicaris, pallide purpurea; rachis inferne saepe scabriuscula. Verticilli 6—8, infimi adpropinquati, eorumque rami inferne undulati rigidi, scabri, longiores 2-pollic. sub anthesi patentes, demum contracti, glumis clausis. Spiculae 2—2½ lin. longae. Glumae lanceolatae acutae inaequales, major carina scabra. Pili glumam breviorem aequantes. Flosculus pilis breviores; palea exterior apice bifida laciniis bidentatis, superiore duplo longior. Arista in medio dorso infixa paleamque aequans. ♃. Jul. Aug. C. Langdorfii Fr. H. N. XIII. 89?

Hab. in paludibus, ad rivulos et prope Christianiam Norvegiae.

6. CALAMAGROSTIS NUTANS (Saut.) Rchb. fl. exc. p. 262. Rchb. Icon. f. 1446; Blytt Norges Fl. I. p. 92.

Culmi 5—6-nodosi, 3—3½-pedales, rigidi, erecti, teretes superne subcompressi. Vaginae laeviusculae, internodiis subbreviores. Folia subglaucescentia, plana, usque ad 4 lin lata, lineari-lanceolata, longe acuminata supra et marg. scabra. Panicula 4—5-pollicaris, multiflora, subnutans, demum erectiuscula ramis fere unilateraliter contracti, glumis clausis.

A *C. phragmitoidi* et *rubicunda* differt praecipue spiculis minoribus (vix 1½ lin. longis), glumis subaequalibus, lanceolatis, acuminatis; pilis glumam breviorem aequantibus, palea pilos aequante; arista in medio dorso paleam pilosque aequante.

Hab. in Norvegia prope Christianiam; Blytt.

7. CALAMAGROSTIS ELATA Blytt (Norsk fl. p. 148. Norges Fl. I. p. 92):

Rhizoma breve. Culmi numerosi, 6-nodosi, 4—5-pedales. Vaginae internodiis breviores, ut folia glaucae: Ligula 1—6 lin. longa, truncata, lacera. Folia angusta, vix 2 lin. latiora longe acuminata. Panicula 6-8 pollicaris prime rubicunda erecta, demum subargentea et nutans. Verticilli inferiores valde approximati quasi e radiis 12 compositi. Spiculae 2 lin. longae, lanceolatae acutae. Glumae inaequales, carina scabriusculae, demum apertae. Pili glumam breviorem aequantes flosculum superantes. Palea exterior ovata obtusa bifida, laciniis denticulatis, paleam superiorem duplo superans. Arista in medio dorso paleam aequans vel subsuperans. Hn. Skand. Fl. p. 298. C. phragmitoides α. major-elata Ands. Gram. Scand. p. 85. Fr. H. N. XIV. p. 91.

C. pallidiflora: glumis carina pallida viridibus marg. hyalinis acutis; arista supra medium paleae infixa eaque longior.

Hab. prope Christianiam Norvegiae.

8. CALAMAGROSTIS PULCHELLA (Saut.) Rchb. fl. exc. Blytt Norges Fl. t. p. 93. Rchb. icon. 1445. fl. germ. exsicc. 905. (non H. N. XIV. 92 quae forma pallida. C. pseudophragmitis).

Culmi a basi vel a geniculis plus minus ramosi v. simplices, 5—6-nodosi, 2—3-pedales laeves. Vaginae striatae, laeves v. scabriusculae, internodiis breviores. Ligula 2—4 lin. longa, truncata fissa. Folia sterilia convoluta, fertilia plana, linearia longe acuminata, scabra, usque ad 4 lin lata. Panicula erecta, 2—5 poll. longa, apice plus minus nutans, rachi gracili subundulata, ramis capillaribus laxis, sub anthesi ovata. Glumae subaequales, acutae, carina scabriusculae. Pili paleam vix superantes. Arista in medio dorso paleam paullo superans. Perennis, Julio florens.

Hab. in Norvegia, prope Christianiam. Blytt.

9. CALAMAGROSTIS ELATA Blytt (Norges fl. I. p. 118):

Rhizoma breve radiculas breves graciles condensatas emittens, et culmos plures erectos, crassiusculos, 6-nodosos (nodis obscure coloratis), 4—5-pedales, usque in apicem laeves. Vaginae internodiis breviores, ut folia glaucescentes, laeves. Ligula 1—6 lin. longa, truncata, lacera. Folia angusta, raro 2 lin. latiora, linearia longe acuminata, supra et margine scabra. Panicula 6—8-pollicaris, primo purpureo-cinerea, erectiuscula, post anthesin argentea valde nutans, secunda. Verticilli inferiores approximati ita ut verticillus quasi unus 12-radiatus efficiatur. Spiculae 2 lin. longae, lanceolatae, acutae. Glumae inaequales, carina scabriusculae, demum divaricato-apertae. Pili glumam breviorem aequantes, paleam multo pellucidam superantes; palea inferior ovata bifida, laciniis denticulatis, paleam superiorem duplo superans Arista in medio dorso vel paullum supra medium inflxa, glumam aequans vel subsuperans.

C. pallidiflora Blytt l. c. Glumae dorso pallide virentes, marginibus hyalinae magis acutatae. Arista fere supra medium dorsum glumamque superans.

Blytt. Norges fl. I. p. 32. Fr. H. N. XIV. 91.

Hab. in Norvegia: Blytt.

10. CALAMAGROSTIS HARTMANNIANA Fries H. Norm. X. 95; S. V. Sc. p. 241.; Anders. Gram. Scand. p. 241. tab. IX. f 101.

C. strigosa Hartm Sk. Fl. ed. 2. 3. (non ed. 4). Steud. Synops. p. 189. — *C. Halleriana* β. *ambigua* Hn ed. 4. — *C. ambigua* Hn. ed 5.

— *laxior* Blytt. (Norges Fl. I. p. 88). Panicula laxa apice nutante.

Hab. in Scandinavia.

11. CALAMAGROSTIS ARUNDINACEA Roth. — Steud. Synops.

— *grandis* Blytt (Norges Flora I. p. 83): Culmis 4-pedalibus, crassis, panicula pedalis multiflora. — An *C. pyramidalis* Hort.?

Hab. in Norvegia.

12. CALAMAGROSTIS GLOMERATA Boiss. et Buhse (in N. Mém. de la Soc. des Nat. de Moscou, v. XII. p. 229).:

Glaucescens, radice . . . . culmo elato laevi, foliis late linearibus margine scabridis ligula elongata lacera; panicula elongata angusta basi subinterrupta spicaeformi virenti, ramis subsessilibus erectis glomerulos densiflore cylindricos ferentibus, glumis subaequalibus anguste lanceolatis acutis viridibus margine rubellis, flosculo basi pilis albis copiosis glumas aequantibus, obsito hyalino glumellis subaequilongis gluma quarta parte brevioribus inferiori medio dorso arista glumas subaequanti obsita, inferiori bidentata.

Hab. in mont. Albrus in valle Kasan 6—7000 p., 26. Juni 1848.

Planta elata. Panicula 6—8-pollicaris eam *Dactylis glomeratae* quodam modo referens. Ab affini *C. Epigejos* differt panicula valde angusta densiflora, spiculis fere dimidio brevioribus, glumis subaequalibus, culmo laevi.

13. **CALAMAGROSTIS DUBIA** Bunge (Reliquiae Lehm. in Mém. présent. à l'Académie de St. Pétersbourg VII. 1854. p. 524):

Panicula patula, glumis anguste lanceolatis acuminatis, inaequalibus, pilis florem superantibus, palea inferiore apice integra in aristam aequantem acuminata, superiore plus dimidio breviore rudimento floris secundi nullo.

Hab. inter Buchara et Samarkand, 31. Aug. 1841.

Habitu omnino *C. persicae* Boiss. arista dorsali distincta. A C. littorea DC. cui proprior, differt palea inferiore integerrima neque emarginata, arista terminali, neque ex emarginatura egrediente, et habitu graciliore; an Arundo glauc. NB.?

Radix longe repens. Culmus cum panicula $2^1/_2$ pedalis strictissimus, laevis, glaber. Folia fasciculorum sterilium convoluta, caulinorum vaginae scabriusculae inferiores breves laxiusculae, superiores auctae sensim longiores, summa semipedalis a panicula pede dimidio remota: ligula membranacea bifida elongata, longe membranaceo-decurrens; lamina folii patentissima, 3—4-pollicaris linea vix latior, plana, supra scabra. Panicula circiter quinquepollicaris, pollice parum latior, laxa, patula; rami basi nudi, supera ramulosi tenuissimi cum spiculis sesquipollicares, hispidulo-scaberrimi. Glumae angustissimae, acutae, compressae, inferior $2^1/_2$ lin, superior $1^3/_4$ lin. longae, dorso scabrae. Pili colli duas lin. longi. Palea inferior vix lineam longa, arista parum longior pilos vix excedens, palea superior minutissima. Caetera generis.

818. DEYEUXIA Clarion.

(Walp. Ann. I. 929.)

1. **DEYEUXIA VIVIPARA** Ph. — Linn. XXIX. 90.

D. caespitosa, pedalis, glabra; foliis margine scabris; paniculam attingentibus; ligula ovata, acuta; panicula erecta, sat laxa, aurea, interdum violaceo mixta; glumis laevibus, lanceolatis, subaequalibus, inferiore uninervia, superiore basi trinervia; palea inferiore, glumam aequante, trinervia, in carina molliter ciliata, inermi, superiore triente breviore, molliter ciliata, bicuspidata; pilis rhachidis dimidiam glumam aequantibus, pedicello sterili in plantulam excrescente.

In monte Cerro del doce de Febrero dicto legit cl. Fonk. — Folia radicalia erecta, dimidium culmum aequantia, complicata, sed vix convoluta; caulina 2—3 poll. longa; panicula 2—3 poll. longa; ramis 3—4 in quovis verticillo, hirtis; glumae fere 4 lin. longae; flos inanis, sterilis.

2. **DEYEUXIA VULCANICA** Ph. l. c.

D. caespitosa, circa 6-pollicaris; culmo erecto, filiformi; intermedio ultimo elongato, nudo; foliis radicalibus convolutis, obtusis, vix $^1/_3$ culmi aequantibus; caulinis acutis, saepe planis; ligula elongata; panicula pollicari, satis laxa; ramulis setaceis hirtis: glumis vix 3 lin. longis, lanceolatis, subtrinerviis, in carina pectinatis; palea inferiore lanceolata, gluma sublongiore, integra, mutica, in carina pectinato-ciliata; flore ipso viviparo.

Ad radicem vulcani de Orsono dicti Februario 1852 legi. — Differt a priore: caule superius nudo, filiformi; foliis radicalibus longe minoribus; glumis brevioribus, una cum palea pectinatis.

3. **DEYEUXIA AGROSTIDEA** Ph.

D. caespitosa, glaberrima, humilis; culmo ad summum sexpollicari, vaginis laxis, suprema inflata, fere usque ad paniculam involuto; foliis convolutis, filiformibus; radicalibus laevibus, culmorum fertilium vero scabris; panicula ovata s. oblonga, satis compacta, violacea; pedicellis capillaceis; pilis brevibus, distantibus, obsitis, spiculas bis aequantibus; glumis oblongo-lanceolatis, uninerviis, violaceis, dorso hispido-ciliatis; florem fere bis aequantibus, margine versus apicem lacero denticulato; calli pilis florem aequantibus; flore stipitato; palea inferiore late ovata, apice truncata et irregulariter incisa, subquinquenervia, e basi aristam paleam bis aequantem emittente;

palea superiore hyalina, apice inciso-lobata, pedicello sterili longe barbato, dimidium paleae superioris aequante.

In editissimis Andibus Talcaregue legit cl. Gay. — Habitus Agrostidis nanae Knth. Glumae 2 lin. longae.

4. DEYEUXIA CHILENSIS Em. Desv, Gram. chil. in Gay: Fl. chil. t. VI. p. 322.

D. caespitosa; vaginis laxiusculis nitidis; foliis setaceis, convolutis, scabriusculis, intus pubescentibus; apice subulato-pungentibus; culmis laevibus, pedalibus panicula angusta contracta; pedicellis erectis, glabris; glumis aequalibus; callo breviter piloso; paleis subaequalibus, glumis paulo minoribus, inferiore apice acute biloba et quadridentata, supra basim aristata; arista tortili glumas excedente; palea superiore acute bidentata; pedicello sterili floris dimidium aequante.

Hab. in Cordillera de Ovalle, regn. Chil. (Gay).

5. DEYEUXIA CHRYSOSTACHYA Em. Desv. Gram. Chil. in Gay fl. chil. t. VI. p. 323. tab. 78. f 2.

D. dense caespitosa, culmis 6—12-pollicaribus, laevibus; foliis pallidis, convoluto-setaceis, scabris; ligula longa, acuminata; panicula spiciformi, densa, nitide aurea, $1\frac{1}{2}$-pollicari; glumis subaequalibus, lanceolatis, obtusiusculis, apice denticulatis, basi 3-vel sub-5-nerviis, flore $\frac{1}{3}$ longioribus; floris fertilis palea inferiore ovata, subenervia, apice truncata et irregulariter incisa denticulataque, aristam rectam brevemque supra medium vel sub apice fere nullum gerente; palea superiore sublongiore, apice triloba, lobis denticulatis; pilis calli brevibus; pedicello sterili breviter barbato, flore dimidio breviore.

Var. β. Panicula longiore, angustiore, sublobata; spiculis minoribus, olivaceo tinctis; glumis latioribus.

6. DEYEUXIA ERYTHROSTACHYA Em. Desv. Gram chil. in Gay Fl chil. t. VI. p. 324. t. 78. f. 1.

D. dense caespitosa, culmis 2—5-pollicaribus, laevibus; foliis convoluto-setaceis, basi subscabris, apice cartilagineo-scabris; panicula spiciformi, $1-1\frac{1}{2}$-pollicari, purpurascente; glumis subaequalibus, dorso scabris, angustis, acuminatis, flore vix duplo longioribus; floris fertilis palea inferiore ovata, 4-nervia, apice biloba, lobis acute dentatis, paulo supra basim aristata; arista inferne tortili, glumas subaequante; palea superiore inferiore paulo breviore, apice biloba, lobis bidentatis; pedicelli sterilis paleis triplo brevioribus, callique pilis paleam aequantibus vel eadem paulo brevioribus.

Hab. in Cordilleris de Talcaregue, provincia de Colchagua regni Chil. (Gay).

7. DEYEUXIA SETIFOLIA Hook. fil. (Fl. Nov. Zeland. p. 299. Tab. 65. B)

Caespitosa, laevis v. scaberula, foliis setaceis filiformibusve, panicula contracta parce ramosa pauciflora, glumis acuminatis carinis scaberulis flore paulo longioribus, palea inferiore basi longe sericea vel glabrata apice truncata 4-cuspidata v. erosa, arista ad medium dorsi inserta glumis $\frac{1}{3}$ longiore incurva, palea superiore breviore 2-dentata setula longe ciliata $\frac{1}{2}$ longiore.

Hab. in Nova Zelandia: northern island: Titiokum, in cacumine montis Ruahine, et Waikare Luke (Colenso.)

Gramen pusillum, caespitosum. Culmus 6 — 8 poll. altus. Folia culmo breviora vaginis brevibus. Panicula 1 — 2 poll. longa; spiculae paucae lucidae $1\frac{1}{2}$—2 lin. longae.

821. ARUNDO Linn.

(Walp. Ann. III. 757.)

1. ARUNDO ZOLLINGERI Büse in pl. Jungh. III. p. 345:

Paniculae amplae longissimae ambitu lanceolatae, rachi magna, ramis capillaribus longis parce breviterque ramulosis; spiculis sub-6-floris, glumis subaequalibus dimidiam spiculam longis, glumella supera inferae $\frac{3}{4}$ aequante, aristis recurvatis.

Hab. ins. Javae Zoll. in herb. acad. Lugd. Bat. (non, ut videtur, in Cat. Moritz. n. 337. (specim. maturum) et no. 380. (specimen virgineum).

Hab. peculiaris, etc.

2. ARUNDO GAYANA Em. Desv. Gram. chil. in Gay: Fl. chil. t. VI. p. 326.

A. foliis subplanis, in marginibus et carina subtus prominente denticulo-scabris; ligula e pilis constante, vaginis apice utrinque pilosis, superioribus subinflatis; panicula 9-pollicari, laxa, nutante, variegata; spiculis 6—9-floris; glumis angustis, basi trinerviis, viridi-violaceis, flores subaequantibus, superiore paulo majore, 8—10 lin. longa; floribus omnibus hermaphroditis; inferioris palea inferiore usque ad aristae tortae et fere aequilongae ortum 5-lineari, elongata, apice bicuspidata, viridi-violacea, 5-nervia, basi usque ad ²/₃ longitudinis suae pilis argenteis 2-linearibus hirta; superiore fere ¹/₂ minore, obovato-elongata, truncata; antheris 3, linearibus stigmatibusque elongatis flavescentibus.

Habitat in locis humidis provinciae Valdiviae; rara (Cl. Gay.)

824. PHRAGMITES Trin.

(Walp. Ann. III. 757.)

1. PHRAGMITES ROXBURGHII N. ab E. in Meyen ap. post. p. 173. — *Arundo Roxburghii* Knth. agr. p. 278. — Büse in pl. Jungh. III. p. 344.

β. *coarctata* Büse; gluma infera superam ³/₄ aequante. — Hab. ins. Sumatram pr. Padang. (Jungh.) — Panicula capillaris, etc.

2. PHRAGMITES DISTICHA Büse in pl. Jungh. III. p. 344:

Panicula contracta, spiculis sub 5-floris, virgineis anguste linearibus, glumis anguste lanceolatis subaequalibus, glumella supera lanceolata inferam ¹/₃ aequante, fol. distichis margine subintegro.

Hab. ins. Sumatrae, ad ripas rivuli K. Lumut. (Jungh.)

Planta magna, speciosa; f. lata, vaginae longissimae internodia multum superantes.

Tribus VII. PAPPOPHOREAE Knth. Gr.

832. ECHINARIA Desf. Fl. Atl. I.

(Walp. Ann. III. p. 761.)

1. ECHINARIA CAPITATA Desf. — Steud. Synops. p. 201:

β. *pumila* Willk. (Prodr. Fl. hisp. I. p. 42.) Caespitosa, culmis 1—2" l., foliosis divaricatis, capitulis paucifloris inter folia fere occultis, aristis glumarum brevioribus rigidioribusque. *E. pumila* Willk. in Bot. Ztg. 1848. p. 715. Steud. Synops. p. 201.

Tribus VIII. CHLORIDEAE Knth. Gram.

836. CYNODON Rich.

(Walp. Ann. III. p. 761.)

1. CYNODON DACTYLON Pers. (Kunth. agr. p. 259). Büse in pl. Jungh. III. p. 350.

Hab. ins. Javae (et Timor Decaisne), ubi admodum vulgare et gregarie occurrit. (Jungh.) Formae potius, quam varietates, distingui possunt sequentes quatuor:

α. *normalis*; validus, f. vaginisque pilosis, spicis quaternis ternisve.

β. *ciliatus*; tenax, f. glabris, vaginis ore pilosis, spicis quaternis.

γ. *tenuis*; attamen firmulus, foliis glabris, vaginis ore pilosis; spicis quaternis.
δ. *australis*; debilis, f. glabris, vaginis ore pilosellis; spicis quinis aut senis.
Habit. β. pr. rivulum K.-Djetan in arenosis, γ. pr. sinum maris Wijnkoopbaai, δ. pr. Weltevreden et Buitenzorg. (Jungh.)

841. ELEUSINE Gärtn.
(Walp. Ann. III. 764.)

1. ELEUSINE BARCINONENSIS Cost. ap. Willk. (Linnaea 1860. p. 125.) differt 'ab Eleusinne indica spicis geminatis vel solitariis 5—9''' long. et 3—4''' lat. valde compactis, spiculis 6—7-floris patentissimis, semine majore subcubico-haemisphaerico, dorso foveis duabus exarato, facie interiore orbiculatim excavato. — Willk. et Lge. Prodr. Fl. hisp. I. p. 46.
Hab. in cultis locisque subhumidis region. inferioris Catalauniae circa Badalona Prat, Hospitalet etc., Costa (Sptbr.) — Hanc speciem eximiam in Catalaunia revera indigenam esse vix crederem eamque cum gossypii lana e zona tropica introductam esse suspicor." Willk.

Tribus IX. AVENACEAE. Knth. Gr.

857. DESCHAMPSIA Palis.
(Walp. Ann. III. 766.)

1. DESCHAMPSIA LATIFOLIA Ph. — Linn. XXIX. 91.
D. culmo pedali, usque ad apicem folioso, glabro, laevi; foliis bipollicaribus, 3 lin. latis; vaginis brevibus, truncatis; panicula angusta, viridiflavescente, interdum purpureo-variegata; ramis ternis in quovis verticillo, spiculis 3—3¼ lin. longis, bifloris; glumis parum inaequalibus, integris, flosculos aequantibus; callis pilosis; rhachi glabra; pedicello secundi floris ⅓ ejus aequante; paleis subaequalibus; inferiore basi trinervia, apice acuta, vix lacero-denticulata, mutica; superiore apice truncata, quadridentata; pedicello tertii floris sterili.
In Andibus dep. Linares invenit orn. Germain.

2. DESCHAMPSIA LAXA Ph. l. c.
D. culmis 2—3-pedalibus, glabris, laevibus; foliis complicatis, radicalibus 3½-pollicaribus, caulinis supremis circa 20 lin. longis, 1 lin. latis; ligula elongata; panicula 6—8-pollicari, laxa; ramis geminis, filiformibus, scabris?; spiculis 3—3¼ lin. longis, flavescentibus, basi violaceis; glumis subaequalibus, apice laceris, flores superantibus; pilis calli dimidium florem aequantibus; pedicello secundi floris pariter dimidium florem aequante; palea inferiore superiorem quadrante superante; arista basilari paleam fere bis aequante.
In litore ad Chonos, Guaytecus etc. frequens cl. Fonkio occurrit. — Differt a D. Kingii arista basilari, a pulchra ramis paniculae geminis, nec 5—7, a discolore panicula magna, spiculis fere duplo majoribus etc.

859. AIRA Linn.
(Walp. Ann. I. 931.)

1. AIRA LENDIGERA Lge. gen. sp. n. 38. ex Willk. Prodr. Fl. hisp. I. p. 65.
Airopsis lendigera Lge. Pug. I. p. 37.

Multiculmus, culmis erectis 2—10" l. foliis angustis planis, paniculae laxae ramulis capillaribus, glumis lanceolatis ¾—1"' l. post anthesin patulo-erectis, aristis basi incurvis breviter exsertis, caryopside ellipsoidea lenticulari-compressa

β *mutica* Boiss. Voy. Flores mutici.

Hab. in arenosis humidis et siccis regionis inferior. et mont. Galleciae (frequens tam in pratis quam in campis, Lge., Plan.) Cantabr. (Durango, Bermejo, Olay.) utriusque Castell. (Medina de Rioseco, Guadarrama, Escorial, Galopagar, Lge,.Bourg. Madrid, Lag. (Used, Lag.; Rascafria, Toledo, Colm.) Estremadura (inter Trujillo et Caceres, Schousby β. in Serrana de Ronda. ⊙. April — Junio.

2. AIRA INVOLUCRATA Cavan. (Knth. Agrostogr. I. 180. n. 7.). — Steud. Synops. p. 222. 55. — Periballia hispanica Trin. fund. agrost. 133; Willk. et Lge. Prodr. fl. hisp. I. p. 63. Airopsis RS.

β. *aristata* Lge (Pug. I. p. 37): palea inferiore floris superioris basi aristata, arista geniculata, spiculam excedente.

Hab. in collibus glareosis ad pagum Cercedillas in montibus Carpetanis (Lge.).

3. AIRA MINUTA Loefl. — *Catabrosa minuta* Tr. (Knth. Agr. I. 370. 5.) Steud. Synops. p. 223. *Molineria minuta* Parl. fl. ital. I. p. 237. Willk. et Lge. Prodr. fl. hisp. I. p. 63. — *Aira pumila* Agd. — *Airopsis minuta* Desv. *Poa minuta* Trin.

β. *baetica* Willk. l. c. (Aira Lagascae Kze. Chlor. n. 561.) Culmi 4—8" l., foliis late linearibus planis, ligula breviore panicula multiflora densiore propter pedicellas spicula vix duplo longiores. — An species propria?

Hab. in arenosis inferioris Hispaniae centralis et australis passim β. in pinetis int. Chiclana et Conil, Wk.

4. A. FLEXUOSA L. — Steudel Synops. (Knth. Agr. I. 290.)

β. *stricta* Gay in Dur. pl. exs. Astur. — Culmi stricti, panicula coarctata (Willk. et Lge. Prodr. fl. hisp. I. p. 66.

γ. *brachyphylla* Gay (l. c); nana, foliis abbreviatis, recurvis, panicula contracta angusta brevi. Lge. pug. I. p. 39. exs. n. 53. — Willk. et Lge. l. c.

Hab. β. in Asturia, in coll. Naviegi reg. alp.; γ. in Astur., reg. Alp. prope Leitariegos, et Castella nova, supra pag. Guadarrama, Escorial, Nova cerrada, Lge.

5. AIRA AGROSTIDEA Loisel. — Steud. Synops. p. 223.

Airopsis DC. (Knth. Agrost. I. 293. n. 2.). — Antinoria Parl. p. 231. Willk. et Lge. Prodr. fl. hisp. — A. Lagascae Kth. Steud. l. c.

Var.? annua? caespitosa, culmis non radicantibus, floribus duplo minoribus (cf. A. insularis Parl) Lge. pugill. I. p. 37. Willk. et Lge. l. c.

Hab. in regno Legion ad pagum Castrillo de las piedras (Lge.)

6. AIRA (DESCHAMPSIA) MEDIA Gouan Steud. Synops. 219. β. antheris abortivis ovariisque carie laborantibus demumque turgidis et ellipsoideo-globosis morbida, pumila, panicula depauperata, coarctata, spiculis ob flosculos laxe distichos et patulos demum compresso cuneatis, flosculorum rachilla glabra v. plumosa, paleae inferioris arista submedia v. subapiculari cimoque terminali, stigmatum barba brevi, simpliuscula (non plumosa). J. Gay in Bull. et la Soc. bot. de France 1858. p. 336. — *Aira subtriflora* Lag. Kth. *Aira pumila* Vill. *Aira triflora* RS. — Aira media β. Mutel. *A. subaristata* Faye. *Deschampsia caespitosa* RS. Willk. et Lge. Prodr. fl. hisp. I. p. 66. *Deschampsia subtriflora* Parlatore fl. Palerm. p. 101.

Hab. in Gallia, Hispania, Italia et Dalmatia.

7. AIRA CARYOPHYLLEA L.

Expl. scient. de l. Alg. II. p. 95.

Var. α. *vulgaris*.

Var. β. *microstachya*.

Huc *Aira cupaniana* Guss. Syn. Fl. Sic. Parl. et *A. capillaris* Guss. Prodr. Fl. Sic. non Host.

8. AIRA CAPILLARIS Host Explor. scient. de l'Alg. II. p. 96.
(*Aira elegans* Willd. (Knth. en. I. 239.)

α. *Lensaei* — flore utroque aristata.
Aira Lensaei Lois. Fl. Gall.

β. *Tenorii* — Glumis obtusioribus; fl. utroque mutico.
Aira Tenorii Guss. Prodr. Fl. Sic.
Airopsis pulchella Ten. Fl. Nap. III. 56. t. 102.

9. AIRA CAESPITOSA L. — Steud. Synops. p. 219. — *Deschampsia* P. B. Hook. fil. Fl. Nov. Zel. p. 751. et Fl. Tasm. p. 118. — *Aira Kingii* Hook. fl. ant. p. 376. t. 135. Steud. Synops. p. 220. — *Aira australis* Raoul, Choix des plantes p. 12?
Hab. in Nova Zelandia: northern island, East coast. (Colenso).

863. TRISETUM Knth.

(Walp. Ann. III. 767.)

1. TRISETUM GLACIALE Boiss. voy. p. 654. tab. 175:
Caespitosum, culmis laevibus glabris humilibus, f. fere omnibus radicalib. planis rigidiusculis utrinque velutinis subtus ad med. et marg. albo-nervosis, ligula subnulla, panicula spiciformi ovato-cylindrica, spiculis bifloris, axi pilosa, glumis inaequalibus lanc. acutis, glumellis subaequalibus, exteriori profunde bifida dentibus obtusis ap. seta terminatis, arista supra b. inserta geniculata b. tortili, glumella interiori binervi ap. bifida.
Tr. glaciale Boiss. El. n. 186.
Avena glacialis Boiss. in sched.
In declivibus summis aridis regionis nivalis Sierra Nevada pars superior ad Picacho de Veleta, Mulahacen, caet. alt. 9000—10500'. Fl. Aug.

2. TRISETUM VELUTINUM Boiss. voy. p. 653. t. 174:
Radice repente perenni, f. dense velutinis albidis, limbo plano brevi patulo rigido acuto, ligula brevissima truncata pilosa, culmis 1—2-pedalibus, panicula composita pauciflora, spiculis glabris 2—3-floris, axi pilosa, glumis inaequalibus scariosis, inferiori obsolete uninervi, glumella exteriore bifida supra med. aristata refracta flosculi longitudine.
Tr. velutinum Boiss. El. n. 187.
Avena velutina Boiss. in sched.
Plantae perennis radices repentes caet. In rupestribus calcareis siccis regionis alpinae, Sierra Tejeda pars superior, Sierra Nevada ad Dornajo, caet., alt. 6000—7000'. Fl. Juli. Aug.

3. TRISETUM HISPIDUM Lange (pug. I. p. 42):
Perenne, caespitosum, fere bipedale, erectum, pilis patulis albidis hispido-scabrum et canescens; folia longa rigida, late linearia, plana, sicca margine involuta, ligula mediocris, acutiuscula, lacero-ciliata, dorso pubescens; articulus culmi superior longo spatio nudus; panicula pallide lutescens, densa, 2—3-pollicaris, lobata, ramis brevibus, sub anthesi erecto-patulis, post anthesin contractis, fere usque ad basin spiculas gerentibus (nonnullis rarius longioribus, basi nudis); spiculae biflorae cum rudimento tertii floris; glumae scabrido punctatae, pilosae lanceolatae acuminatae, inferior oblique 1—2-nervia, flosculis paullo brevior; superior aequaliter trinervia, eosdem paullulum superans; palea inferior lanceolata, undique hirsuta, obsolete 5-nervia; nervo medio carinata, apice in apiculum bisetum contracta; arista scabriuscula, fere longitudine paleae, paullo infra ejusdem apicem (ad sextam partem fere paleae longitudine inde ab apice) inserta, e basi reflexa adscendens (in speciminibus siccis squamoso-divaricata); palea superior inferiori aequilonga, ciliata, apice brevissime bidentata. Willk. et Lge. Prodr. Fl hisp. p. 72.

Hab. in fissuris rupium ad oppidulum Villafranca del Viergo (20. Jul. c. fl.). Post haec (1858) a cell. Boissier et Reuter in montibus Castellae veteris lectum est.

4. TRISETUM GALLECICUM Willk. (Prodr. Fl. hisp. I. p. 72.)
Multiculme, culmis 4—10'' l. inferne ramosis, foliis ciliatis vaginis pubescentibus, thyrso ½—1½'' l. angusto sublobato, spiculis 1½''' l. 4-floris, glumis valde inaequalibus glaberrimis, rachi ad florum basin brevissime pilosula, palea inferiore laevi glaberrima ad quartam partem superiorem aristam rectam paleam subaequantem gerente.
Habitus Koeleriae phleoidis. — *T. neglectum* Lge. exs. n. 62. non RS.
Hab. in rupibus ad la Corunna et Pontevedra in Galecia. Lge.

5. TRISETUM NEGLECTUM RS. — Steud. Synops. p. 225. β. *ciliatum* Wk. (Prodr. fl. hisp. I. p. 72): gluma inferior longe ciliata, palea inferior hirsuta.
Hab. in Hispania in agro Malacit. (Wk.)

6. TRISETUM GAUDINIANUM Boiss. Voy. II. 652. Lge. et Wk. Prodr. Fl. hisp. I. p. 73. *T. Cavanillesii* Kth. Trin. Steud. Synops. p. 225. *Avena Loeflingiana* Gaud. non L. — Differt a *T. Loeflingiana* PB. statura minore, spiculis paniculam laxam effusam parvulam formantibus, racheos pilis praelongis flore longioribus palea inferiore glabra supra medium aristata.
Hab. in alpibus vallesiacis et in arenosis regionis alp. regni Granat.

7. TRISETUM PUMILUM Kth. Steud. Synops. p. 227. — *Avena pumila* Desf.
Hab. etiam in insula Teneriffa, in arvis in cultis prope Candelaria (Cosson: Bullet. de la Societ. bot. de France 1856. p. 59.)

8. TRISETUM NOEANUM Boiss. diagn. XIII. p. 48.
T. annuum pumilum, foliis patule vel retrorsum hirtis, ligula brevi truncata denticulata, panicula e folio supremo brevissime exserta breviter ovato-oblonga lobata, spiculis confertis breviter pedicellatis nitidis minutis glumis aureo rubelloque variegatis aequalibus oblongis acutis subulato-acuminatis carina vix scabridulis caeterum laevibus glabris, flosculis binis gluma paulo brevioribus axique glabris, palea inferiori paulo supra medium dorsum aristata superne hyalina bidentata dentibus triangularibus breviter setaceo-mucronatis, arista geniculata basi subtortili glumis duplo longiori, palea superiori vix breviori bidentata.
Hab. prope Byzantium Noë 1844 sub no. 116.

Specimina mea 3—4 pollicaria, panicula 9—10 lin. longa, spiculae magnitudinis earum *Tr. condensati* paniculae forma et characteribus nostrae speciei affinis sed quod differt glumis non variegatis superiori breviori dimidioque angustiori, paleis valde inaequalibus etc.

9. TRISETUM MACROCHAETUM Boiss. diagn. XIII. p. 48.
T. annuum pumilum, foliis lineari-setaceis glabris vel brevissime ciliatulis vaginis glabris. ligula brevissima truncata denticulata, panicula breviter oblonga parva erecta pedicellis scabridis, spiculis parvis bifloris nitidis, glumis lanceolatis acuminatis carina scabridulis superiori paulo breviori dimidioque angustiori, axi adpresse et brevissime hirsuta, flosculis glabris, palea inferiori glumis subdimidio breviori apice in 2 setas ei aequilongas glumas apice subaequantes abeunti supra medium dorsum arista geniculata basi tortili glumis subduplo longiori obsita, palea superiori quadruplo breviori vix perspicua, pedicello minimo piloso ad basin cujusque flosculi sito.
Hab. in Palaestina unde duo specimina tantum plantis circa Hierosolymam lectis commixta retuli.

Statura habitus et paleae longe setosae *Tr. Loeflingiani* et *Valesiaci* a quibus panicula minus densa spiculisque minoribus differt; prius insuper recedit flosculis hirtulis, posterius pilis axeos flosculos fere aequantibus.

10. **TRISETUM GLUMACEUM** Boiss. diagn. XIII. p. 49.

Tr. annuum pumilum, foliis lineari-setaceis teneris flexuosis vaginisque retrorsum hirtis, ligula brevi truncata fimbriata hirta, panicula basi vagina subdilatata folii supremi involucrata oblongo-spiciformi densa, glumis flavidis nitidis lanceolatis acutis aequalibus superne ad carinam subscabridis caeterum glabris laevibus, axi brevissime pilosa, palea exteriore glabra gluma dimidio breviore setis 2 rectis ei subaequilongis terminata sub medio dorso arista geniculata basi tortili e glumis breviter exserta obsita, palea superiore anguste lineari setacea paulo breviori, pedicello hirsuto ad basin superiorem uniuscujusque flosculi sito.

Hab. in Arabia petrea Palestinae contermina ubi legi Apr. ineunte.

Planta 4—6 pollicaris culmis pluribus ascendentibus, panicula sesquipollicem longa. Spiculae nitidae Tr. condensati sed majores, ab eo ut et a Tr. neglecto paleis longe setosis axique hirta praeterea discedens; a specie praecedenti cui pedicello piloso ad basin flosculorum accedit glumis aequalibus latioribus, palea superiori majori spicaque densa distinctum.

11. **TRISETUM LINEARE** Boiss. l. c.

Tr. annuum glabrum vel tomentellum culmis strictis, vagina brevissima truncata ciliolata, foliis e basi lineari setaceis strictis, panicula spicata lineari elongata densa, spiculis 1 vel 2 floris cum pedicello piloso brevissimo florem superiorem referenti, glumis angustissime subulato-lanceolatis longis aequalibus carina scabridulis caeterum glabris, axi glabra, palea inferiore lineari-subulata in 2 setas ea multo longiores glumam longe superantes abeunti paulo sub apice arista subgeniculata basi tortili setas superanti aucta, palea superiori subaequilonga lineari-setacea apice bidentata.

Trisetaria linearis Forsk. Delile Eg. pl. 12. fig. 3.
Trisetum arenarium Labill. Ic. Pl. Syr. Dic. 10. tab. 7.
Trisetum trisetaria R. et Sch.

Hab. in Aegypto (Del.), Arabia petraea (Boiss.), Syria (Labill.).

Omnibus notis generi Triseto adnumerandum nomenque specificum Forskahlei antiquius aptissimumque omni jure servandum.

12. **TRISETUM (EUTRISETUM) TOLUCCENSE**, var. **TOMENTOSUM**.

T. culmis erectis, $1\frac{1}{2}$—2-pedalibus, superne tomentosis, basi 2-nodis; vaginis longis foliisque utrinque velutinis; ligula brevi, lacero-dentata; panicula spiciformi, $2\frac{1}{2}$—3-pollicari, viridi-purpureo stramineoque amoene picta; ramis tomentosis; glumis spiculas 3 lin. longas, 2—3-floras aequantibus, ovato-acutis, mucronatis, 3-nerviis, inferiore paulo minore; palea inferiore $2\frac{1}{2}$—3 lin. longa, glabra, lineari, subtereti-coriacea, punctulato-scabra, ad apicem acuminatum binervium bimucronulatum et ad margines scariosa, supra medium aristata; arista contorta, 3 lin. longa, geniculata, infra genu fulva. — T. toluccense Knth. Gram. I. 101. 297. tab. 60. var. β. nob. — Avena toluccensis H. B. Kunth. Nov. gen. I. 148.

Hab. in Cordilleras altis de Talcaregue, prov. Colchagua regn. Chil. (Gay).

13. **TRISETUM (EUTRISETUM) LASIOLEPIS** Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 346.

T. caespitosum, culmis stricte erectis, pedalibus, glabris, apice puberulis, inferne 2-nodis; vaginis glabris, basi puberulis; ligula truncata; foliis angustis, 1—2-pollicaribus, planis v. plicatis, glabris, margine scabris; panicula lineari, bipollicari, spiciformi, macra, viridi-purpurascente; ramis puberulis; spiculis $2\frac{1}{4}$ lin. longis, subtrifloris; glumis ovatis, obtusis, dorso scabris, inferiore 1-, superiore 3-nervia; floris inferioris palea inferiore hispida, dorso viridi-fusca, sub-4-nervia, margine et apice bimucronato-scariosa, supra medium arista refracta, ipsius longitudine, praedita; palea superiore in flore inferiore paulo breviore, in superiore paleam inferiorem aequante; antheris ovatis, $\frac{1}{2}$ lin. longis..

Hab. in Chile (Gay). Nonne forma fertilis Triseti Preslei.

14. TRISETUM (EUTRISETUM) CHROMOSTACHYUM Em. Desv. Gram. chil. in Gay: Fl. chil. t. VI. p. 350.

T. 3-pedale, robustum, erectum, culmo sub nodis villosis pubescente; vaginis foliisque late linearibus, 5—8-pollicaribus, molliter utrinque pubescentibus; panicula 4½-pollicari, spicaeformi, basi lobato-interrupta, obscure viridi; spiculis dense congestis, sub-5-floris, 3½ lin. longis; floribus patulis; glumis inaequalibus, inferiore anguste lineari, superiore trinervia, ovato-acuta, mucronata; palea inferiore glabra, 3 lin. longa, elongata, dorso chartacea, teretiuscula, punctulata, apice acuto bicuspidato, ad bis tertiam partem aristata; arista divaricata, ipsius longitudine; palea superiore inferioris ⅔ attingente, acute bidentata; antheris linearibus, luteis, ½ lin. longis.
Hab. in campis prope Santiago (Gay).

15. TRISETUM (EUTRISETUM) VARIABILE Em. Desv. Gram. chil. in Gay; Flora chil. t. VI. p. 351.

T. 1—2-pedale erectum culmo 2—3-nodo; nodis glabris; foliis planis, lineari-acuminatis margine scabris vaginisque glabris vel puberulis; panicula spiciformi, contracta, 2—3-pollicari, nitida, viridi-straminea vel lutescente; spiculis sub-3—4-floris, 2½—3 lin. longis, floribus erectis; glumis inaequalibus, inferiore anguste lineari, superiore trinervia, ovato-acuta, spicula breviore; palea inferiore 2½ lin. longa, elongata, dorso chartacea, teretiuscula, tuberculato-asperata, in apice acuto bimucronata marginibusque scariosa, ad bis tertiam partem aristata; arista divaricata, ipsius longitudine; palea superiore inferiore paulo breviore; antheris ovatis, ⅓ lin. longis.

Var. α. *flavescens*. Glumis spiculas flavescentes fere aequantibus; panicula densa.
Var. β. *virescens*. Glumis spiculis nitide virescentibus ⅓ brevioribus; panicula angusta, sublobata.

Hab. in regno chil. Valparaiso (Bertero. n. 998), Guanegue, prov. Valdivia (Gay), Calbuco, Chiloe (Gay). Valde affine T. subspicato, affinius tamen Avenae phleoidi D'Urv.

16. TRISETUM (KOELERIA) MICRATHERUM Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 352.

T. glaucum, pedale, culmis erectis, usque ad apicem foliosis; vaginis pubescentibus; foliis angustis, linearibus, planis intus pubescentibus; panicula angusta, laxiuscula, 2½-pollicari, colore viridi-glauco et albido variegata; spiculis subtrifloris, 2¼ lin. longis; glumis valde inaequalibus, inferiore anguste lineari, acuta, vix 1 lin. longa; superiore trinervia, elliptico-elongata, acuta, spicula breviore; palea inferiore elongata, trinervia, glabra, dorso viridi, paulo sub apice scarioso et obtuse bilobo breviter aristata; arista recta, vix lineam longa; antheris ovato-elongatis, ¼ lin. longis.
Hab. locis graminosis Rio-Bueno, prov. Valdivia regni chil. (Gay).

17. TRISETUM LITORALE Ph. Linn. XXIX. 92.

T. glabrum; culmo erecto, gracili, 1—2-pedali; foliis radicalibus 6 poll. longis, superioribus vaginas suas aequantibus, 2½ poll. longis, 2 lin. latis, margine ciliatis; ligula brevi, subovata; panicula erecta, contracta, tripollicari; spiculis trifloris, 5 lin. longis; glumis inaequalibus; inferiore anguste lineari, uninervia, superiore trinervia, ovato-acuta; palea inferiore pilosa, 3½ lin. longa, sub apice bicuspidato aristata, arista contorta, glumam aequante.
In lapidibus maritimis prope Coquimbo legit cl. Gay. Herb. chil. no. 148.
Differt a Tr. antarctico nodo infimo glabro, foliis ciliatis, paleis hirsutis; spiculis 5 lin. longis; a chromostachyo glabritie; spiculis laxis, paleis hirsutis; a variabili foliis ciliatis, panicula laxiore, spiculis 5 lin., nec 2½—3 lin. longis.
Variat caule humili, e basi ramos 3—4 quadripollicares emittente.

18. TRISETUM ANDINUM Ph. l. c.

Tr. culmo 9—12-pollicari erecto, inferius glaberrimo, flavo, superius nudo, pubescente, purpurascente; nodis omnibus occultis; vaginis glaberrimis striatis; foliis pla-

nis, brevibus, (supremo 1 poll. longo) superius margineque scabris; ligulis brevibus, dentato-ciliatis; panicula contracta, vix 1½ poll. longa; ramis pubescentibus; spiculis 2¾ lin. longis, 2—3-floris, viridi, fulvo, purpureoque variegatis; glumis glabris spiculas haud aequantibus, inaequalibus, superiore fere 2 lin. longa, inferiore breviore, utraque ovato-lanceolata, basi trinervia; margine lato scarioso; carina serrato-ciliata; palea inferiore glaberrima, 2¾ lin. longa, bicuspidata, ad ⅔ aristata, arista divaricata longitudine paleae; palea superiore aristae insertionem superante, acute bidentata.

In Andibus prope Antuco invenit cl. Gay. Herb. chil. no. 210.

Differt a Tr. tolucensi culmo superius modo pubescente, haud villoso; foliis brevioribus, spiculis minoribus, glumis eas haud excedentibus, magis inaequalibus.

19. TRISETUM CHILENSE Ph. l. c.

Tr. culmo erecto seu adscendente, 9-pollicari, gracili, glaberrimo; internodio ultimo longissimo; foliis culmorum sterilium pubescentibus, ciliatis; vaginis foliisque culmorum fertilium glabratis; foliis brevibus, supremo vix pollicem longo; panicula fere 2 poll. longa, pauciflora, angusta, laxa; spiculis 2¾ longis, 3—3½-floris, variegatis; glumis inaequalibus; inferiore lanceolata, uninervia, dorso laevi; superiore late ovata, subquinque-nervia, dorso serrato-ciliata, 2½ lin. longa; palea inferiore glaberrima, fere 2 lin. longa, enervia, apice acuto biscuspidata, ad ⅔ aristata, arista divaricata, longitudine paleae; palea superiore aristae insertionem superante, acute bidentata.

VENTENATA Koel.

(Endl. gen. pl. n. 863. sub Trisetum.)

In pascuis insulae Chiloe, ad Castro a cl. Gay lecta est. Herb. no. 147.

Differt ab antecedente culmo multo graciliore, glaberrimo; panicula pauciflora laxa, glumis valde inaequalibus, floribus minoribus.

1. VENTENATA SUBENERVIS Boiss. et Balansa (Pl. Or. exsicc. no. 7. et app. Coss. et Dur. Fl. Alger. t. II. p. 104. in adnot). Bulletin de la Société botan. de France 1857 p. 305.

Affinis *V. dubiae* Coss. et DR., sed facile distinctu glumis sensim attenuatis, glabriusculis, inaequalibus.

Hab. in collibus petraeis prope Smyrna.

2. VENTENATA DUBIA.

Explorat. scientif. de l'Algérie II. p. 104. — Trisetum tenue Roem. et Sch. (Kuth. en. I. 298.)

MONANDRAIRA Em. Desv.

— Gram. chil. in Gay: Fl. chil. t. VI. p. 341. —

Spiculae biflorae, adjecto tertii floris pedicello sterili. Glumae 2, obtusiusculae; inferior vix minor. Rachis pilosa. Flores glumas paulo superantes, distantes. Palea inferior dorso convexiuscula, oblonga, apice biloba, lobis acutis inaequaliter bidentatis, supra basim pilosam aristata; arista contorta et geniculata, glumis longior. Palea superior bicarinata. Squamulae 2, oblongae, obtusae, integrae, ima basi connatae. Stamen unicum, anticum. Anthera obovata, truncata, superne fere usque ad basim biloba; connectivum brevissimum; loculi obtusi, basi in appendicem parvam, subrecurvam desinentes. Ovarium pedicellatum, glabrum. Stigmata 2, sessilia, brevissime plumosa, pilis simplicibus. Caryopsis a latere compressa, oblique obovato-oblonga, exsulca, glabra. Embryo fructus tertiam partem aequans, scutello obovato, radicula velata, epiblasto minimo et truncato praeditus.

Trisetum sp. Kth. Humb. Gram. II. 457. t. 142. — *Deschampsia* sp. Trin. in Act. petrop. VI. nat. t. II.

Stamine unico et forma antherae a congeneribus differt, a Triseto insuper glumis subaequalibus et obtusiusculis.

1. MONANDRAIRA GLAUCA Em. Desv. l. c. p. 342. t. 79. f. 1.

M. humilis, 1—5-pollicaris, glauca; culmis patulis, dense caespitosis; vaginis parum inflatis; ligula ovata, brevi, apice lacera; foliis brevibus, convoluto-filiformibus; panicula angusta, erecta, 1—3-pollicari, viridi-fulva; spiculis 2 lin. longis; floribus 3, summo ad pedicellum plumosum reducto; glumis 3-nerviis, elongatis, subaequalibus, spicula paulo brevioribus; flore inferiore, ovato-elongato, $1^3/_4$—2 lin. longo; palea inferiore basi utrinque pilosa, 4-nervia, apice scarioso-biloba, lobis acute bidentatis, ad quartam partem aristata; arista geniculata, flore $^1/_3$ longiore; palea superiore paulo breviore, emarginaturam attingente; pedicello floris secundi inferiore $^1/_4$ minoris piloso, 1 lin. longo.

Hab. in locis montosis pascuum Santiago (Gay).

2. MONANDRAIRA BERTEROANA Em. Desv. l. c. p. 343. t. 73. f. 3.

M gracillima, erecta, 6—14-pollicaris, culmis filiformibus; ligula elongato-acuminata; foliis planiusculis, angustis; panicula angusta, erecta, 3—5-pollicari, albido-violacea, nitida; spiculis $2^1/_2$ lin. longis; floribus 3, summa ad pedicellum redacto; glumis spiculam superantibus, angustis; flore inferiore angusto, 2 lin. longo; palea inferiore basi utrinque dense pilosa, 4-nervia, apice alte scarioso-biloba, lobis acuto-subulatis, inaequaliter 2-dentatis, inter lobos 1-dentata, paulo supra basim aristata; arista geniculata flore duplo longiore; palea superiore inferioris $^3/_4$ attingente. — Trisetum Berteroanum Kth. Humb. Gram. II. 457. t. 142.

Hab. in locis montosis et aridis regni chil. Santiago (Gay), San Antonio (Gay), San Fernando (Gay), Bancagua (Bertero., n. 30. et 271.).

864. AVENA L.

(Walp. Ann. II. 767.)

Classification des espèces du genre *Avena* du groupe *Avena sativa* (Avena, Avenatypus) Bulletins de la Soc. bot. de France I. (1854) p. 11.

Avenatypus Coss. et Germ. Fl. par. 636.

Plantae annuae foliis planis. Spiculae vulgo majusculae, pendulae saltem post anthesin. Glumae 7—11 nerves.

Subsectio I. Sativae. Flosculae in rachiola non articulatae nec denique solutae.

1. AVENA SATIVA (L. sp. 118):

Panicula ramis undique diffusis; glumis subaequalibus; flosculo inferiori sessili; palea inferiore 2—3-dentata v. apice breviter bifida, arista inferne contorta. — Vulgatissime culta, nonnumquam subspontanea.

2. AVENA ORIENTALIS (Schreb. Spicileg. 52):

Panicula angusta, unilaterali; glumis subaequalibus; flosculo inferiori sessili; palea infer. 2—3-dentata v. apice breviter bifida, arista flexuosa nec inferne contorta. — Ut species praecedens vulgo culta, rarius subspontanea.

3. AVENA STRIGOSA (Schreb. Spicileg. 52.):

Glumis parum inaequalibus flosculos subsuperantibus; flosculo inferiore stipitato; palea inf. apice bifida, laciniis in aristas elongatas pro-

ductis, glabra v. dorso plus minus pilosa, arista inferne contorta. — Culta et passim spontanea.

4. AVENA BREVIS (Roth. Abhandl. 42, Tent. fl. Germ. I. 40):

Glumis parum inaequalibus flosculos fere aequantibus; flosculo infer. stipitato; palea infer. apice bidentata, glabra v. dorso plus minus pilosa, arista inferne contorta. — Rarius culta, passim inter segetes.

Obs. A. uniflora Parlat. ap. Webb. phyt. Can. sect. III. 401. t. 278.) nobis forma tantum uniflora videtur hujus speciei sat variabilis. Insulae Canarienses ita forsan patria *A. brevis*.

5. AVENA NUDA (L. sp. 118):

Glumis flosculos non aequantibus; flosculo infer. subsessili, superioribus longe stipitatis; palea infer. membranacea ut in glumis nervis 9—11 distinctis percursa, non coriacea ut in speciebus aliis hujus sectionis. — Passim culta, raro subspontanea.

Subsect. II. Agrestes. Flosculus inferior in rachiola articulata et inde facile maturitate soluta.

a) Biformes: flosculae inaequales; inferior nempe articulata et solubilis, ceterae non articulatae nec demum deciduae.

6. AVENA VENTRICOSA Balansa (pl. Alger. exsicc. n. 557).

Glumis parum inaequalibus; palea inferiore flosculi inferioris basi in callum attenuata calcariformem subulatum cicatrice lineari perangusta impressum.

Locis incultis Algeriae.

7. AVENA STERILIS L. (sp. 118):

Glumis fere aequalibus; palea inferiore flosculi inferioris callo brevi cicatrice lata ovali suborbiculari impresso.

In regione mediterranea.

8. AVENA ERIANTHA DR. (apud Duchartre Rev. bot. I. 360 et in Explor. sc. Alger. t. 41. f. 3):

Glumis inaequalibus, inferiore subduplo breviore; palea inferiore flosculi inferioris attenuata in callum calcariformem subulatum cicatrice lineari-elliptica apice villosa et bifida lobis obtusis impressum.

Locis incultis Algeriae occidentalis et orientalis.

Var. *acuminata:* palea inferiore apice glabrescente et aristis 2 longis terminata.

b) Conformes: flosculi omnes conformes, cum rachiola articulatae.

9. AVENA LONGIGLUMIS DR. (apud Duchartre Rev. botan. I. 359 et in Explor. scient. Alger. t. 41. f. 1):

Glumis fere aequalibus, flosculos longe superantibus; palea inferiore attenuata in callum calcariformem subulatum cicatrice lineari apice bifida lobis in aristas elongatas productis impressum.

In Hispania australi, Algeria occidentali.

10 AVENA CLAUDA DR. (in Duchartre Rev. bot. I. 360 excl. syn. et in Expl. sc. Alger. t. 42. f. 2):

Glumis inaequalibus, inferiore fere duplo breviori; palea inferiori attenuata in callum linearem fere obtusum, cicatrice elliptica apice bifida lobis in aristas elongatis impressum.

In Algeria, Graecia.

Var. *eriantha;* palea inferiore apice (basi?) villosa. — Haec varietas *A. erianthem* simulat a qua facile tamen distinguitur articulatione flosculi.

11. AVENA HIRSUTA Roth Catal. bot. (*A. barbata* Brot. — *A. hirtula* Lagasc. — *A. atherantha* Presl.).

Glumis fere aequalibus, flosculos parum excedentibus; palea inferiore callo lineari sat brevi fere obtuso cicatrice lineari-oblonga, apice bifida, lobis in aristas elongatas vulgo productis impresso.

In regione mediterranea, in Europa centrali rarior.

11a. AVENA BARBATA Brot. Lusit I. p. 108 (1804). Parl. fl. ital. I. p. 291. Godr. et Gren. Fl. Fr. III. p. 512. Willk. et Lge. Prodr. fl. hisp. I. p. 68. — *A. hirsuta* Roth. Koch. Boiss. Steud. Synops. p. 230. — *A. atherantha* Presl. cyp. et gram. sicul. 30.

α. *genuina* Willk. l. c. Spiculae biflorae, glumae 10—11‴ l., paleae pili albi demum flavescentes, arista floris infimi $1\frac{1}{2}$″ l. Folia etiam inferiora plerumque glabra, rarius ad paginas marginesque pubescentia. (A. hirtula Lag. — Steud. Synops. p. 230.)

β. *triflora* Willk. l. c. Spiculae minores triflorae, glumae 7—8‴ l. paleae pili demum brunnei, arista floris infimi 15‴ l. demum valde geniculata. Folia plerumque omnia ciliata et pubescentia. An spec. propria? — A. hirtula Auct. non Lagasc., A. barbata β. minor Lge. pug. I. p. 39.

Hab. in Lusitania, Gall. merid. et occid., Cors., Ital., Dalm., Turc., Graec., Taur. Cauc., Afr. boreali. β. in regno Murc. (S. de Corrascoy, Bourg., prov. Murciam. Grenier), prov. la Carolina et Ponte vedra, Lge.

12. AVENA FATUA L. (sp. 118.):

Glumis fere aequalibus, flosculos parum excedentibus; palea inferiore callo brevi cicatrice oblonga v. ovali suborbiculari, apice bidentata vel breviter bifida impresso.

In Europae segetibus passim. Caucasus. Siberia. Oriens. Abyssinia. In Americam australem verosimiliter introducta.

Var. *glabrescens* (A. hybrida Peterm. sp. Koch. Synops. 2. p. 917. — *A. Byzantina* C. Koch): palea inferiore glabra, callo excepto, vel dorso vix villoso.

13. AVENA BROMOIDES Gouan H. monsp. 52. — Steudel Synops. p. 231. (A. pratensis Boiss. Voy.).

α. *genuina* Willk. et Lge. (Prodr. fl. hisp. I. p. 69): Spiculae 8—10‴ l. saepe geminatae v. ternae in racemum 4—8″ l. dispositae, plerumque 6—8-florae, aristis valde divaricatis. Culmi $1—2\frac{1}{2}$′ l. (A. bromoides auct. hisp. *A. australis* Parl. ex descript. cfr. Godr. Fl. fr. p. 518).

β. *microstachya* Willk. l. c. Spiculae 5—7‴ l., plerumque singulae in racemum simplicem 2—4″ l., dispositae, saepissime 5-florae. Culmi $\frac{1}{2}$—1′ l. (A. pratensis auct. hisp. non L.)

γ. *straminea* Lge. (Pug. I. p. 40. Willk. et Lge. l. c.) Color spicularum jam florendi tempore aureo-stramineus.

Hab. in Lusitania, Gallia, Pedemontia, Ital., Graecia.

β. praecipue in prov. centr. orient. et boreal. Hispaniae reg. mont. γ. in Castella vet. (monte Toroyo pr. Valladolid.) Lge.

14. AVENA ALBINERVIS Boiss. Voy. 656. t. 176. (*A. splendens* Boiss. El.) Non differt ab *A. sulcata* Gay nisi foliis rigidioribus evidentius callose marginatis nervatisque panicula breviore, spiculis 5—6-floris aristatis, palea infer. apice subbifida, dorso obsolete sulcata, pilorum fasciculo paululum longiore. An potius varietas australis hujus speciei. Cf. Willk. Sert. 1080. — Lge. et Willk. Prodr. Fl. hisp. I. p. 69.

Hab. in aridis umbrosis regionis mont. et alp. regn. Granat. ad 4—9000′. (S. de Estepona, Boiss., pr. Granada, Fk. S. Nevada, Bourg.) ♃. Juli.

15. AVENA LUDOVICIANA Durieu de Maisonneuve (Actes de la Soc. Linn. de Bordeaux. XX. I. Liv. p. 41:

Annua; foliis vaginisque glabris vel pilosiusculis, ligula brevi ovata vel truncata denticulato-fimbriata; panicula secunda, subsecunda vel in planta vegetiori plane effusa laxa, simplici vel composita; spiculis constanter bifloris cum tertii floris rudimento 20 millim. vix longis, axe glabro; glumis latiuscule lanceolato-acuminatis subaequalibus, inferiore 7—9, superiore 9—11-nervia, flores superantibus, flore inferiore articulato, callo obtuso villosissimo, foveola ovato-elliptica haud articulati 10—12 millimetr. circiter longa, utraque in apicem bicuspidatum attenuata, 7-nervia, a basi ad medium pilis rigidis obsessa, aristam geniculatam sesquilongam gerente; caryopsi lineari attenuata, basi rostellata, macula hilari angustissime notata.

Hab. sat frequenter prope Bordeaux, locis calcareis, ad margines viarum, in incultis etc. Affinis A. sterili.

16. AVENA FILIFOLIA Lag. — Steud. Synops. p. 233. — Willk. Prodr. Fl. hisp. I. p. 68.

α. *glabra* Boiss. Voy. II. 655: folia basilaria lin. glabra, rigidà. Variat spiculis 8''' l. triaristatis et 5 — 6''' l. biaristatis (*A. filifolia* Wlk. Sert. 1079. *A. cantabrica* Lag. Steud. Synops. p. 232. — *A. convoluta* Presl. Steud. Synops. p. 232.)

β. *velutina* Boiss. l. c.: incurva dense molliter velutina, foliis 4—6'' l. Spiculae 5—6''' l.

Hab. in fissuris rupium glareosisque calcareis regionis montanae et subalpinae Hispaniae boreal. et austr. passim. α. etiam in Pyren. gall., Calabr. et Sicilia.

17. AVENA SEDENNENSIS DC. — Steud. Synops. p. 232. — *A. montana* Vill. Delph. II. 151. Willk. et Lge. Prodr. Fl. hisp. I. p. 69. — *A. sempervirens* Lap. et Benth. — *A. fallax* RS.

α. *planifolia* Willk. l. c. folia plana vel canaliculata basilaria 4—6'' l.

β. *teretifolia* Wk. l. c. folia complicata subteretia 2—4'' l. recurva.

Hab. in glareosis rupiumque fissuris reg. alpinae passim, α. in pyreneorum pascuis ad 6500—7000', β. in Sierra Nevada.

18. AVENA NEUMAYERIANA Vis. Fl. Dalm. III. p. 339. (Add.)

Panicula spiciformi stricta, spiculis subsessilib., compressis, glumis subquinquefloris 5-nervib., flosculis dorso aristatis barbatis glumam subaequantibus, valvae glumellae exterioris bifidae laciniis lanceolatis, f. convoluto-setaceis striatis glabris.

Hab. in gramin. apricis rupestribus montis Orien, ubi invenit Fr. Neumayer. Spiculae stramineae glumis coloratis. Fl. Julio. ♃.

Simil. aliquantulum *A. pratensi* L.

19. AVENA PUBESCENS L. — Steud. Synops. p. 231. — β. *diantha* Heuff. (Verh. zool.-bot. Gesch. zu Wien. 1858. p. 229): spiculis subbifloris flore secundo, ovario abortiente, masculo; valvis paleaque inferiore trinerviis.

Hab. in arena mobili legionum Illyrico- et Teutonico-banaticarum. Mai. Jun.

20. AVENA CARMELI Boiss. — Boiss. diagn. XIII. p. 50.

A. perennis, radice ...., culmo erecto glabro, foliis planis anguste linearibus flexuosis utrinque scabris inferiorum vaginis retrorsum hispidis superiorum glabris, ligula brevissima fimbriata, panicula contracta spiciformi simplici erecta, spiculis geminatim dispositis pedicellis strictis crassis striatis altero subnullo altero spicula triplo breviori suffultis subtrifloris, glumis lanceolato-linearibus breviter acuminatis rigidis argute inferiori 3 superiori longiori 5 nervi. axi glaberrima in articulos cum flosculis facillime ruptili, flosculis glaberrimis, palea inferiori lanceolato-lineari coriacea viridi 7 nervi ad nervos subscabrida apice albo-membranacea breviter et acute bidentata dorso superne ad quartam longitudinis partem arista basi tortili recta palea paulo longiori aucta, palea superiori paulo breviori membranacea lineari obtusa superne margine remote ciliata.

Hab. in monte Carmelo ubi legi Maio ineunte 1846.

Sesquipedalis, folia caulina 4—5 lin. longa sesquilineam lata, spica circ. tripollicaris, palea inferior circ. 5 lin. longa lineae $^{3}/_{4}$ lata. Species habitu Av. bromoidem referens ei affinis sed ab ea axi glabra fragillima, spiculis 2—3 nec 7—9 floris, pedicellis spiculorum crassis brevibus distinctissima; hac ultima nota Av. macrae Steven accedit quae foliorum limbo brevi convoluto, radice ut videtur annua, spiculis multifloris etc. differt. Habitus quoque Gaudiniae a qua spiculis geminatis non sessilibus longius differt.

21. AVENA AGROPYROIDES Boiss. l. c. p. 50.

A. annua? glabra glaucescens radice fibrosa, culmis erectis, vaginis striatis laeviusculis limbo rigidulo patulo anguste lineari margine scabridulo, ligula elongata acuta glabra, spiculis brevissime pedicellatis solitariis axi strictissimis subtrifloris paniculam spicaeformem angustissimam laxam formantibus, glumis teneris lanceolatis trinerviis superne hyalinis acuminatis inaequalibus superiori flosculos aequanti, axi glabra callo ad basin flosculorum brevissime piloso, palea inferiori ad medium usque adpresse et brevissime sericea superne glabra hyalina apice brevissime bidentata supra medium arista geniculata basi torta ea paulo longiori aucta.

Hab. in Argolide unde misit amiciss. Spruner.

Culmi 1—1$^{1}/_{2}$ pedales, spicae 3—4 pollicares, spiculae inferiores sua longitudine invicem distantes fere 7 lineas longae. Species ab A. pratensi et A. bromoidi quibus affinis foliorum limbo rigido patulo, ligulis elongatis, spiculis strictis solitariis dissitis spicam angustam formantibus, paleis inferne hirtulis diversa.

22. AVENA MACROSTACHYA Balansa Expl. scient. de l'Alg. II. p. 114.

Caudice caespitoso, fasciculos folior. steriles emittente; f. planis.

23. AVENA PAUPERCULA Ph. Linn. XXIX. 94.

A. annua, caule humili, laevi, glabro; vaginis retrorsum pilosis; foliis utrinque pubescentibus; panicula pauciflora; spiculis subunifloris; glumis angustis, florem subaequantibus, inferiore uninervi, superiore trinervi; palea inferiore 5-nervis (nervis parum conspicuis), bifida, ex divisione aristam tortam, scabram, paleae aequalem emittente; caryopsi lineari, apice pilosa.

Prope Tomé unicum specimen invenit orn. Germain, quod depauperatum videtur.

Tota planta 5$^{1}/_{2}$-pollicaris; folium supremum 16 lin. longum, fere 1 lin. latum; panicula modo spiculis 4 composita; pedicelli apicem versus dilatati, sulcati, vix scabri; glumae 5 lin. longae; palea inferior 6$^{1}/_{2}$ lin., apicibus ab origine aristae inde 2$^{1}/_{2}$ lin. longis; nervus medianus, apices, aristae scabri; arista 7 lin. longa; caryopsis 2$^{2}/_{3}$ lin. longa, dorso carinata, ventre profunde sulcata, pili apicis breves; pedunculus secundi floris tertiam paleae partem aequans, glaber; pili breves ad basin floris fertilis.

24. AVENA SCABRIVALVIS Trin. Act. petrop. ser. VI. nat. I. Bot. p. 28. Steud. Synops. p. 231. n. 33. Em. Desv. Gram. chil. in Gay: Fl. chil. t. VI. p. 356. tab. 79. f. 2.

25. AVENA JUNGHUHNII Büse. B. in pl. Jungh. III. p. 345.

Panic. contractae ramis paucis ramulisque 2—4 elong., spiculis 4—5 floris, glumis lanceolatis haud magnis, arista glumellae inferae valde longa, ovario piloso, culmo compresso.

Hab. in ins. Javae graminosis, in planitie montis Diëng. (Jungh.)

Pulchra, 6-ped.; f. longissima etc.

Ic. add.

AVENA LONGIGLUMIS Dur. (Walp. Ann. I. 934. n. 6.)
Explor. scient. de l'Algérie tab. 42. n. 1.

AVENA CLAUDA Dur. (Walp. Ann. I. 934. n. 4.)
Explor. scient. de l'Alg. tab. 42. n. 2.

AVENA ERIANTHA Dur. (Walp. Ann. I. 934 n. 5.)
Explor. scient. de l'Alg. tab. 42. n. 3.

865. ARRHENATHERUM Palis.

(Walp. Ann. I. 935.)

1. ARRHENATHERUM ERIANTHUM Boiss. et Reut. p. 121. — Willk. et Lange Prodr. fl. hisp. I. p. 70. — A. avenaceum Boiss. Voy. non PB. A. bulbosum Kze. non Schtdl. *Avena hispanica* Lge. pug. 41.

Differt ab A. elatiori panicula longiori (4—7" l.). Spiculis majoribus, praecipue arista floris masculi e basi paleae inferioris prodeunte et flore hermaphrodito toto excepto apice adpresse longeque hirsuto.

Hab. in rupestribus, dumetis ad sepes regionis infer. et mont. Hispaniae centralis et australis. Etiam in Algeria et Lusitania.

2. ARRHENATHERUM PALAESTINUM Boiss. diagn. XIII. p. 51.

A. radice fibrosa ad collum tubera globosa superimposita ferenti, foliis glabris linearibus planis, ligula breviter ovata lacera, culmis erectis, panicula elongata composita anguste pyramidata ramis elongatis flexuosis nutantibus, glumis stramineis glabris dorso scabridis inferiori breviori angustiorique, flosculis binis basi hirsutis inferiori sessili paulo supra basin arista inferne tortili eo $2^1/_2$ plo longiori aucto hirtulo marginibus ciliato, superiori pedicellato infra apicem arista brevi recta instructo toto ad aristae insertionem usque adpresse et longe hirsuto.

Hab. in Palestina loco non notato. Boiss. 1847.

Planta 2—3 pedalis, panicula 7—9 pollicaris ramis inferioribus saepe bipollicaribus. Ab A. bulboso flosculo superiori longe hirsuto facile distinguendum. Ab A. erianthо B. et R. quod eodem charactere gaudet ut videtur specifice distinctum paniculae amplae compositae ramis elongatis inferioribus subnutantibus.

871. DANTHONIA Dc.

(Walp. Ann. III. 769.)

1. DANTHONIA SUBULATA Hook. fil. (Fl. Tasmaniae II. p. 121. tab. 161 B.);

Foliis brevibus filiformi-setaceis vaginisque patentim hispido-pilosis demum glabratis, culmis gracillimis, panicula brevi erecta subsimplici pauciflora (purpurea), glumis sub-5-floris, palea inferiore basi medioque dense barbata pilis brevioribus, aristis lateralibus gracilibus palea duplo longioribus ultra glumas exsertis, intermedia paulo longiore gracili subtorta. — An D. setacea Br.? (Gunn. 1456.)

Hab. in Tasmania: Georgetown et Launceston (Gunn), Richmond (Oldfield) et in Victoria Novae Hollandiae.

Gramen pusillum, gracile, dense caespitosum. Folia 2—3 poll. longa. Culmi usque ad 15 poll. alti, gracillimi; panicula 1—2 poll. longa; spiculae 5—7-florae.

2. DANTHONIA PAUCIFLORA Br. (Prodr. 177). Steud. Synops. p. 246. Hook. fil. Fl. Tasman. II. p. 121. tab. 162. A.

Hab. in Tasmania et Victoria Nov. Holl.

3. DANTHONIA NERVOSA Hook. fil. (Fl. Tasman. vol. II. p. 121. tab. 163. A.)

Scaberula vel glabra, spiculis racemosis, glumis obtusiusculis erosis inaequalibus inferiore basi 3-nervi superiore 5-nervi, flosculis basi villosis, palea inferiore scaberula coriacea 7-nervi bifida apicibus erosa dorso supra medium arista tortili elongata, superiore bidentata. — *Avena? nervosa* Br. Prodr. 178. — *A. hydrophila* F. Muell. ms. — *Amphibromus nervosus* Nees. in Hook. Lond. Journ. Bot. II. 420. — *A. Nesii* Steud. Synops. p. 328. — *A. junceus* Nees in Hb. Lindl. (Gunn. 1793, 995).

Hab. locis uliginosis Tasmaniae (Formosa Gunn.) et Novae Holl.: New South Wales, Victoria, Swan River.

Gramen altum, gracile. Culmi laxiusculi 2—3-pedales, foliosi. Folia longa, plana, ligula elongata, membranacea, acuta. Panicula v. potius racemus nutans, superne

ramis scabris divisa. Spiculae pallide virides, fere ½ pollic. longae. Flosculi pedicellati, circa 5, teretes, glumis multo longiores.

4. DANTHONIA AUCHERI Hook. fil. (Fl. Tasman. II. p. 122. tab. 172. b.):
Panicula nutante, glumis 2—4-floris coloratis apice acutis erosis, floribus basi villosis, palea inferiore scaberula laciniis brevibus subintegris muticis vel aristatis. (Gunn. 995.)
Hab. in parte boreali Tasmaniae (*Gunn*); Cheshunt (Aucher). Floret Decemb.
Panicula quam in D. nervosa latior, ramis inferioribus verticillatis; spiculae floribus paucioribus instructae, palea inferior glabrior laciniis saepe in aristam rectam, subulatam, nigram productis.

5. DANTHONIA ANTARCTICA Hook. fil. (Fl. New Zeel. p. 302):
Elata, rigida, culmis basi crassis, foliis culmo longioribus crassis coriaceis inferioribus basi intus sericeis, ligula villosa, costa valida, panicula maxima effusa, ramis elongatis, pedicellis sericeis, spiculis (magnitudine variis) 4—7-floris, albis nitidis, glumis inaequalibus, flosculis distantibus multo brevioribus acutis apice integris erosis bidentatis, palea inferiore sericeo-villosa bifida, arista recta v. recurva palea duplo longiore basi compressa. — *Bromus antarcticus* Hook. fil. Fl. ant. p. 97. t. 54. *Arundo flavescens* Banks et Sol. Mss.

α. *elata:* culmis validis, foliis coriaceis latiusculis intus basi sericeis, panicula densiflora, spiculis majusculis.

β. *laxiflora:* elata, culmis foliisque ut in var. α., panicula rariflora. — *Agrostis pilosa* A. Cunn. fid. Herb. Heward, non Rich. Flor. (Hook. fl. New Zeal. t. 69 A.) — *A. elatior* Steud. Synops. p. 174.

γ. *parviflora:* spiculis minoribus sparsis.

δ. *minor:* glaberrima, culmis brevioribus, foliis setaceo-involutis, panicula pauciflora.

Hab. in Nova Zelandia: Northern et Middle Island (Banks et Sol.), in cacumine mont. Ruahine (Colenso, Sinclair etc.). Var. γ. Southern Island (Lyall).

6. DANTHONIA BROMOIDES Hook. fil. (fl. New Zeal. p. 303. t. 68a.):
Glaberrima, foliis culmo longioribus involutis, collo barbato, panicula lanceolata, contracta, ramis pubescentibus, spiculis magnis 6-floris, flosculis glumis ovato-lanceolatis acutis multo longioribus supremis incompletis, rachi villosa, palea inferiore dorso basique sericeo-pilosa superne puberula apice breviter bicuspidata, arista recta basi plana palea subduplo longiore, palea superiore carinis scabris, avario glaberrimo, squamulis obovatis ciliatis.
Hab. in Nova Zelandia: Northern Island (Stephenson).
Ceteris speciebus dissimilis, habitu potius Bromi mollis ad ovarium omnino glabrum videtur. Culmus pedalis; panicula 4—5 pollices longa; spiculae flavo-virescentes, non lucidae, ¾ poll. longae, 6—7-florae.

7. DANTHONIA PILOSA R. Br. Prodr. 177. Steud. Synops. p. 245. Hook. fl. New Zeal. p. 303 et fl. Tasm. p. 120.
D. Gunniana Nees. Steud. Synops. p. 245.
Hab. in Nova Zelandia: Northern et Middle Island: Bay of Island etc. (Sinclair etc.); Canterbury (Lyall).

8. DANTHONIA GRACILIS Hook. fil. (Fl. New Zeal. p. 303. t. 69 B):
Foliis filiformi-setaceis culmisque gracilibus patentim pilosis, panicula subsimplici elongata contracta pauciflora, glumis sub-4-floris flosculis longioribus, palea inferiore basi medioque villosa, fasciculis superioribus pilorum elongatis paleam occultantibus, aristis lateralibus paleae aequilongis gluma brevioribus, intermedia gracili breviter exserta.

Hab. in Nova Zelandia: Middle Island; in campis, et Motucha Valley, prope Nelson (Monro).

D. pilosae valde affinis, similiter pilosa sed gracilior, foliis longioribus. Panicula valde angusta; palea inferior supra medium fasciculo denso pilorum longo et aristis tribus instructa.

9 DANTHONIA SEMIANNULARIS R. Br. (Prodromus p. 177). — Labill. Pl. Nova Holl. v. I. p. 26. t. 33. Trin. sp. Gram. v. 5. t. 52. Hook. fil. fl. New Zeal. p. 304.

α. *breviseta:* foliis setaceis, aristis lateralibus paleam aequantibus, intermedia aequilonga v. paulo longiore.

β. *Unarede* Raoul (Choix de plantes p. 11. t 4): foliis latioribus involutis, aristis lateralibus paleam aequantibus, intermedia glumis ½ longiore. — Steud. Synops. p. 246.

γ. *setifolia:* foliis setaceis, panicula effusa pauciflora, aristis lateralibus paleam aequantibus intermedio glumis longiore.

Hab. in Nova Zelandia: Northern et Middle Island, α. et β. copiose (Cunningham etc.), γ. in montosis (Colenso); Gordons Nob, prope Nelson (Monro).

10. DANTHONIA COLLINA Ph. Linn. XXIX. 96.

D. culmis erectis, trinodibus, glabris; foliis vaginisque longe pilosis, radicalibus convolutis, setaceis, tertiam culmi partem aequantibus; vaginis foliorum caulinorum elongatis, ore dense pilosis; ligulis superioribus elongatis; foliis supremis vix pollicaribus; panicula contracta, spiculis 10—15 formata et glumis calycinis subaequalibus, lanceolato-subulatis, flosculos superantibus, fulvis, interdum violaceo-tinctis, inferiore distincte trinervia; flosculis circa 3, palea inferiore 5 lin. longa usque ad medium et profundius partita, bicuspidata, pilis longis albis, palea vix brevioribus undique cincta; arista 6 lin. longa.

In collibus apricis praedii mei S. Juan habitat. — Folia radicalia 4—6 poll. longa; nodi castanei, panicula 2½—3-pollicaris; glumae 7 lin. longae, paleae 4 lin. longae, nempe 2 lin. usque ad insertionem aristae. — Differt a D. picta Nees, quacum vaginis pilosis convenit, paleis 4—5 lin. longis, vix nervosis, nec 3½ lin. longis, 9-nerviis, arista 6 lin. nec modo 4 lin. longa, panicula ampliore etc.

11. DANTHONIA CHILENSIS Em. Desv. Gram. chil. in Gay Fl. chil. t. VI. p. 360. tab. 80. f. 3.

D. caespitosa, culmis erectis, simplicibus, gracilibus, 1—2 pedalibus; vaginis glabris, ligula pilosa: foliis convolutis, basi pilosis; panicula angusta; spiculis 3—6, 3—5-floris, viridi-violaceis; glumis aequalibus, linearibus, 5—6 lineas longis; callo florum elongato, compresso, utrinque breviter albo-piloso, pedicellum obtegente; palea inferiore obovato-elliptica, in marginibus involutis albo-pilosa, ceterum glabra, dorso virescente, 5—7 nervia, apice membranacea, biloba, lobis triangularibus in setam desinentibus, inter lobos arista 3 lineas longa inferne plana et tortili praedita; palea superiore obovato-spathulata, integra. —

Hab. in Chile (Gay.) Valde aff. est *D. sericeae* Nutt.

12. DANTHONIA VIRESCENS Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 363.

D. culmo erecto, 15-pollicari; nodis brevibus, atris; vaginis foliisque convolutis glabris, culmum dimidium superantibus; ligula pilosa; panicula bipollicari, subpatula, nitida, virescente; glumis spiculas 2—3-floras ⅓ superantibus, subaequalibus, carina viridibus, basi 5-nerviis, 7—8 lin. longis, a basi lanceolata longe acuminatis; racheos articulis glabris; palea inferiore ovato-elliptica, 9-nervia, usque ad aristam 1½ lin. longa, inter lobos lanceolatos longe setigeros aristam 4½—5 l. longam, planamque gerente, triplici serie pilorum cincta; pilis superne in decem fasciculis aggregatis, superioribus genu aristae attingentibus; palea superiore elongato-obovata, apice tridentata, aristae insertionis locum multum superante.

Hab. in Chile, (Gay). Affines sunt D. unaredo, D. pilosa et D. semiannularis, qui differunt spiculis 5—6-floris, paleis inferioribus basi valde angustatis, palea superiori numquam tridentata

13. DANTHONIA VIOLACEA Em. Desv. Gram. chil. in Gay fl. chil. VI. p. 365. tab. 80. f. 1.

D. caespitosa, culmis erectis, pedalibus et ultra; vaginis foliisque convolutis, glabris, ore utrinque pilosis; ligula brevi, pilosa; panicula sesqui-pollicari, densiuscula, angusta ovata, variegato-violacea, spiculas 20—40 habente; spiculis 2—3-floris, adjectis 1 u. 2 sterilibus; glumis subaequalibus, carina viridi subtrinervia, 4 lineas longis; pedicellis glabris; palea inferiore ovato-elliptica, subcylindracea, usque ad aristam 1 lin. longa, 9-nervia, triplici serie pilorum basi, supra basim et sub arista cincta, basi breviter callosa, apice inter lobos 2 lineares, apice longe setigeros aristam 8½ lin. longam sub geniculo tortam fulvamque gerente, palea superiore angusta.

Hab. in Chile (Gay).

14. DANTHONIA AUREO-FULVA Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 362. tab. 80. f. 2.

D. caespitosa, humilis, 4—5-pollicaris, culmis filiformibus; vaginis foliisque setaceo-convolutis, brevibus, recurvis, pilosis; ligula brevi, pilosa; panicula angusta; spiculis 4—7-virescenti et aureo-fulvo variegatis, 4—7 floris; glumis aequalibus, 4—5 lin. longis, spicula brevioribus; callo florum elongato, compresso, utrinque albo-piloso, pedicellum amplectente; palea inferiore obovato-elliptica, inferne in marginibus involutis albo-pilosa, ceterum glabra, dorso virescente, 5-nervia, apice membranacea, biloba, lobis triangularibus in setam desinentibus, inter lobos arista aureo-fulva 8 lin. longa praedita.

Hab. in Chile (Gay). Proxima est D. chilensi.

871/1. TRICHONEURA Ands. (nov. gen.)

(En. pl. ins. Gallopagos p. 148; Eugénies Resa p. 148.)

Spicae racemose paniculatae, spiculae distichae alternae solitariae v. geminae, altera sessilis altera pedicellata. Glumae 2 bracteiformes carinatae membranaceae, flores aequantes acutatae, inferior 3-nervia carinata, ex ap. biloba aristata, in nervis marginalibus pectinato-ciliata. Lodiculae angustae lineares truncatae. Stamina 3. Ovarium elongatum obconicum glaberrimum. Styli 2, terminales. Stigmata penicelliformia, pilis simplicibus.

Est genus distinctissimum inter Leptochloam et Danthoniam prorsus medium.

1. TRICHONEURA HOOKERI And. l. c. p. 149.

Viscida, pilis et tuberculis minutis ortis undique scabra; paniculae ramis strictis simplicibus spicatis; spiculis 5—7 floris, palearum nervis lateralibus longissime ciliatis.

Calamagrostis pumila Hook. transact. cf. Lin. soc. XX. p. 176.

Hab. locis maxime sterilib. ins. Albemarle et Chatham (Ipse).

871/2. TRIPOGON R. et S.

(Knth. en. I. 520.)

1. TRIPOGON EXIGUUS Büse. — Büse in pl. Jungh. III. p. 353.

Spica virginea secunda, florente disticha, spiculis 5—7 floris, fl. tabescentib. superioribus nonnullis; f. linearibus, canaliculatis, pilis raris obsitis; staminibus . . . . ?

Hab. insulam Javae in apricis siccis reg. supremae montis Lawu, alt. 10000' (Jungh.) Vix palmaris, etc.

Tribus X. FESTUCACEAE Knth. Gr.

MACROBLEPHARUS Ph. novum genus *Festucacearum* (μακρός longus, βλέφαρον ciliae).

(Linnaea XXIX. 100.)

Flores paniculati; panicula contracta, spicaeformis, lobata; spiculae minutae, compressae, octo- v. multiflorae; floribus distichis, patentibus; glumae duae, carinatae muticae; paleae duae membranaceae, glumis sublongiores, inferior ovata, subtruncata, mucronata, trinervia, nervo medio basi setis erectis brevibus armato, lateralibus margini approximatis, scabris; palea superior parum brevior, bicarinata, carinis longissime ciliatis; stamina ....; stigmata duo sessilia; caryopsis ovato-lanceolata, teres, glaberrima, intense rufa.

Genus ciliis longissimis carinarum paleae superioris primo adspectu cognoscendum.

1. MACROBLEPHARUS CONTRACTUS Pb. l. c.

Annuus (?), culmos steriles fertilesque simul emittens; folia radicalia nulla; culmi erecti, graciles, 1—1½-pedales, basi ¾ lin. crassi, trinodes; vaginae glabrae, ad os et praesertim ad ligulam longe pilosae; ligula subnulla; folia plana, 1—1¼ lin. lata, glabra; superiora longiora, fere 5 poll. longa; panicula 3¾ poll. longa, interrupte lobata; rami plerumque singuli, modo 4 lin. longi; spiculae 3½ lin., glumae modo ½ palea major ¾ lin. longa.

In valle de Limari dicta detexit cl. Gay. Herb. Chil. n. 129.

SESLERIACEAE Koch Synops. ed. 2. p. 910.

Ueber die Sesleriaceen der Flora von Siebenbürgen, von Dr. Ferd. Schur, in Verh. des zool.-bot. Vereins in Wien. 1856. p. 191.

Inflorescentia panicula contracta, capitata v. ovoidea, raro elongata et spiciformis, basi ochreola suffulta vel, in Oreochloa, destituta. — Spiculae compressiusculae 2—3-florae. Flores hermaphroditi flosculo supremo interdum abortiente. Stylus brevissimus. Stygmata longissima filiformia ex apice floris emergentia. Glumae valvis magnis flores fere tegentibus. Palea inferior obtusa, 3—5-dentata (dentes mucronatae vel aristatae) vel, in Oreochloa, mutica aut brevissima aristata. Caryopsis libera, teres vel compressiuscula exsulca.

Gramina perennia montana et alpina praecipue in locis rupestribus calcareisque, raro in umbrosis et pratensibus.

OREOCHLOA Lk.

(Lk. hort. berol. I. 44. Sesleriae sect. II. Koch l. c. p. 912.)

Panicula subracemosa spiciformis, simpliciter ramosa ramis subunilateralibus, a basi decrescentibus, rachis flexuosa edentata. Spiculae subpyramidatae, ovato-oblongae, 2—3-florae, flosculo supremo tabescente. Flores pedicello apice calloso insidentes; rachis latere exteriore pilosa. Glumae valvis subaequalibus, ventricosis, convexis, muticis, acutiusculis, infra apicem leviter carinatis, flosculis dimidio brevioribus, complicatis ambitu oblongis, supra medium attenuatis, membranaceis, inconspicue trinerviis. Glumellae palea inferior dorso convexa, inconspicue quinque-

nervia, complicata oblonga, apice breviter bifida, vix emarginata mucronula interjecta instructa, dorso infra medium ciliata, supra basin pilosa, palea superiore multo minore inclusa, bicarinata apiceque breviter acute bifida, ambitu oblongo-linearia, carinis ciliata. — Lodiculae membranaceae, oblongae, ovario quadruplo breviores. Ovarium oblongum, glabrum. Stylus brevissimus nudus. Stigmata longissima, plumosa, ex apice floris emergentia. — Caryopsis oblonga, leviter compressa, exsulca.

1. OREOCHLOA DISTICHA Lk. (l. c.):

Rhizomate fibroso, plerumque caespitoso: culmo 3—9 poll. alto, erecto, glabro, striato, inferne tantum foliato; foliis culmeis linearibus, brevibus, novellis longioribus filiformibus, canaliculatis vel convolutis, culmo plerumque brevioribus, omnia glabra obtusa; ligula folii supremi exserta, integerrima ¾ lin. fere longa, sensim acuminata; vagina folii supremi parum inflata, laxa; vaginis marcescentibus demum in fila solutis; panicula racemosa, spiciformis, 4—6 lin. longa, 2—4 lin. lata. Spiculis distichis, nitidis, sordide coeruleis, paleis margine albo-hyalino instructis. — Gramen perenne gracillimum. — *Sesleria disticha* Pers. Syn. I. 72. Steudel Synops. p. 2[illegible]. *Cynosurus distichus* Hoffm. D. fl. 2. p. 49.

875. SESLERIA And.; Schur Verh. d. Zool. Vereins zu Wien.
(Walp. Ann. III. 771.)

Panicula contracta capitata vel elongata. Spiculae compressiusculae apice dilatatae, clavatae, 2—3-florae. Glumae valvis persistentibus, carinatis, acuminatis vel aristatis, magnis, flores fere tegentibus. Glumellae palea inferior obtusa, 3—5 lobato-dentata, dentes mucronatae vel aristatae. Axis spicularum glabra. Stigmata longissima, pilosa, ex apice floris emergentia. Ovarium piloso-hirtum. Caryopsis turbinata, teres, apice pilosa, libera, stylo coronata, exsulca, subpedicellata.

Hilum instar maculae fuscae laterali.

1. SESLERIA COERULEA And. (l. c.):

Glumae valvis inaequalibus membranaceis, valva inferiore minore, complicata ambitu lanceolata superiore oblonga, utraque a medio attenuata et aristata, arista valvis dimidio breviore. Glumellae palea inferiore complicata ambitu ovato-oblonga, apice rotundato breviterque trilobata, lobis in setas aristamque exeuntibus, arista crassa paleam dimidiam subaequante; palea superiore obtuse bifido. Ovarium apice pilosum. Foliis omnibus apice rotundatis muccronatisque; rhizomate repente vel fibroso.
Descr. l. c. vide.

Variat *a*) coerulescens v. straminea, *b*) gluma coerulea v. hyalina *c)* paleae glabrae v. strigoso-pilosae, *d*) panicula capitata v. elongata, *e*) ramuli paniculae secundi v. rachin undique tegentes, *f)* rhizoma fibrosum v. longe repens, *g*) folia lata v. angusta, magis minusve elongata apice rotundato-obtusa v. mucronata, rarissime sensim acuminata, *h)* culmus elatus debilis v. humilis et rigidus basi tantum v. supra medium foliatus, *i*) floret vere et autumno, Majo et Septembri, *k*) crescit sociatim v. aglitatim in locis lapidosis inque pratis uliginosis.

Varietates transsilvanicae memorabiles haece:

***Sesleria coerulea autumnalis v. serotina* Schur l. c. Rhizomote valde repente, articulato, culmos 3—4 florentes proferenti; culmos 9—3 poll. rigido, supra medium foliata, foliis culmeis infimis 6—12 poll. longis, 3 lin. latis, linearibus apice rotundatis; foliis culmeis superioribus oblongis, mucronatis, 4 lin. long. 1½—2 lin. latis plerumque complicatis et recurvis; ligula folii supremi brevissima, panicula spiciformi elongata 6—9 lin. longa 4 lin. lata laxiflora, flosculis coeruleis.**

m) Varietas elongata aestivalis rhizomate fibroso v. breviter repente; culmo ad medium foliato 12 poll. alto; panicula elongata cylindrica 12—14 lin. longa; glumae valvis flosculos aequantibus, acutioribus et vix aristatis, albis: paleis glabris, spiculis variegatis nempe valvis albidis paleis coeruleis = *S. c. elongata* mihi.

2. SESLERIA RIGIDA Heuff. (Rgsb. Flora 1833. p. 366.) Schur l. c.:
Glumae valvis subaequalibus, hyalinis, complicatis, ambitu oblongo-lanceolatis e medio attenuatis, acuminatis, flosculos subaequantibus. Glumellae palea inferiore semper strigoso pubescente, complicata ambitu oblonga, obtusissima, inaequaliter quinqueloba v. dentato-lobata, dentibus in 2—4 setas aristamque exeuntibus, arista ciliata paleam suam dimidio aequante; palea superiore acute bifida. — Ovarium apice pilosum. — Folia culmea elongata rotundato et subito acuminata: folia novella culmo multo breviora; vel plana et flaccida, vel complicata et rigidiora Ligula folii supremi exsecta inciso ciliata. Rhizomate fibroso vel repente. Inflorescentia laxiusculo-capitata v. ovoidea, axis undique flosculis tecta, spiculis sordide coeruleis culmo rigido supra basin crenatam recto. — (Steud. Synops. p. 298.)
Descript. l. c. vide.

Variat:

a) *capitata:* panicula subcapitata laxiflora ½ pollic. longa demum basi attenuata; foliis novellis angustis ¼ lin. latis complicatis vel canaliculatis; culmo 8—10 poll. alto, ad medium foliato. = *S. capitata* Schur olim.

b) *ovoidea:* panicula ovoidea densiflora post anthesin basi attenuata clavata ¾ poll. longa spiculis subtrifloris; foliis novellis flaccidis culmo multo brevioribus, plerumque complanatis, latioribus 1—1½ lin. latis; culmi 12—13 poll. alto. — *S. Bielzii* Schur Verhandl. und Mittheil. des Siebenbürg. Vereins für Naturwiss. zu Hermanstadt 1850. p. 109 n. 187.

c) *rigidifolia:* panicula ovata densiflora 8—9 lin. longa, basi obtusa; foliis omnibus complicatis, rigidis, culmum excedentibus et aequilatis; culmo rigido 15—18 poll. alto. = *S. rigida* Heuff. vera.

d) *longiseta:* panicula multiflora sub anthesi basi dilatata et recte truncata; valvis paleisque longius aristatis, arista valvam et paleam suam aequante; foliis fasciculorum novellium planis flaccidis vel complicatis, culmum aequantibus v. longioribus; culmo curvato, sub panicula flexuoso, supra medium foliato; spiculis 2 lin. longis 1½ lin. latis, clavatis, supremorum valvis flosculos superantibus. — *S. permixta* Schur in litt. S. coerulea Friv. in herb. imp. An S. coerulans Friv. secund. descript. Steud. Syn. p. 296.

3. SESLERIA HEUFLERIANA Schur l. c. (Sertum fl. Transilv. 1853. p. 84. n. 3101):
Glumae valvis subaequalibus hyalinis, complicatis ambitu oblongis, a medio attenuatis et aristatis, arista valvam dimidiam subaequante. Glumellae palea inferiore complicata oblonga, apice rotundato-acuminata, trilobato-dentata, dentib. in 2 setas aristamque exeuntibus, arista valida paleam suam subaequante; palea superiore acute bifida; ovarium pubescens; folia culmea suprema a basi sensim attenuata infima complicata, omnia acuta; folia novella longissima flaccida, culmum plerumque superantia sensim attenuata, acuta, canaliculata v. plana, pagina superiore glauco-pruinosa, nervosa, nervis tribus crassioribus, margine serrulata; rhizomate fibroso et repente; panicula ovoidea, axis undique flosculis tecta; spiculis numerosis sordide coeruleis culmo rigidiusculo, supra basin curvatam recto.
Descript. l. c. vide.

Variat:

a) *polydactyla:* inflorescentia dense capitato-lobata, ¾ poll. longa et lata; culmo compresse subaphyllo, 12 pollic. vel humili curvatoque et 6 pollic. alto, foliis multo breviore.

b) digitata: inflorescentia tridigitata, lobo medio 12 lin. longo, binis lateralibus duplo brevioribus culmo 15 poll. alto, foliis plerumque breviore.

c) elongata: inflorescentia spiciformi elongata, laxiuscula, 1—2 poll. longa 3 lin. lata; rhizomate valde repente. — Aff. *S. robustae* Schott analecta bot. 1859?

4. SESLERIA TRANSSILVANICA Schur l. c.

Glumae valvis subaequalibus coeruleis, valve inferiore angustiore, complicata ambitu lanceolata, valva superiore oblonga, utraque longissime attenuata et aristata valvam dimidio aequante. Glumellae palea inferiore complicata ambitu oblonga, obtuse acuminata, interdum quinquelobato-dentata, quinquenervia, nervis dentibusque in 2—4 setas aristamque exeuntibus; arista paleam suam subaequante rarissime parum longiore; palea superiore complicata ambitu oblongo-lanceolata, sensim attenuata, acute bifida, laciniis paleam dimidio aequantibus. Caryopsis subtomentosa apiceque pilosa. Folia culmea elongata infima culmo dimidio breviora; folia novella longissima culmum interdum superantia, omnia sensim attenuata, acutissima, nervosa, margine crasso albo-cartilagineo serrulata. Ligula subnulla. Rhizomate vix repente, brevissimo, lignoso. Inflorescentia densiflora amoene coerulea ovoidea. Culmo supra basin curvatam erecto.

In montibus calcareis herbaceis Transsilvaniae occidentalis, prope Coronam ibidem in monte Hangestein lecta, elev. 2500 ped.

Descript. l. c. vide.

5. SESLERIA HAYNALDIANA Schur Verh. u. Mittheil. 1850, p. 176.

Glumae valvis subaequalibus interdum hyalinis, flosculis dimidio brevioribus, complicatis ambitu ovatis, infra apicem recurvis, subito attenuatis et mucronatis. Glumellae palea inferiore complicata ambitu oblongo-ovata, obtusiuscula, apice 3—5 acute lobato-dentata, evidenter quinquenervia, dentibus in 2 setas aristamque exeuntibus, arista palea sua quadruplo breviore; palea superiore complicata ambitu oblonga, apice acute bifida. Ovarium turbinatum, strigoso-pubescens. Stylus ovarium duplo superans. Caryopsis matura subglabra. Folia culmea brevissima plerumque complicata; folia novella longissima angustissima, setaceo-convoluta v. complicata, omnia folia glabra obtusa viridia pagina superiore subglauco-pruinosa. Panicula plerumque depauperata unilateraliter spiculifera, viridis v. pallide coerulea. Rhizomate fibroso v. breviter repente. — *S. tenuifolia* Schr. non Schrad. *S. filifolia* Gris. non Heuff. *S. gracilis* Sert. fl. Trans. 3096. *S. tenella* Schr. non Host. ibidem 3095.

Hab. in montibus subalpinis Transsilvaniae, in rupibus calcareis 2500—7000 pedes alta, Martio usque ad Augustam florens.

Descript. l. c. vide.

Variat:

a) praecox pumilo-montana: rhizomate fibroso; culmo humili 3—6 poll. alto, foliis omnibus angustissimis culmo brevioribus, complicatis, mollibus; panicula laxa subsecunda vel undique spiculis tecta, 3—4 lin. longa, flosculis pallide viridibus vel sordide coeruleis, glabris. — In alpibus calcareis, Kapellenberg prope Kronstadt. — Mart. Apr. 2500 ped. alt.

b) *aestivalis depauperata alpina:* rhizomate subrepente; culmo humili 3—4 poll. alto, gracillimo, supra medium foliato; foliis mollibus culmo florenti brevioribus, culmeis 3—5 inaequalibus; panicula simplex, depauperata e spiculis 5—8 composita; flosculis pallide coeruleis tenuissime strigosis. — *S. tenella* Schr. non Host. — In alpibus calcareis e. g. Kerzechoriensibus ibidem in monte Butian, 6000 ped. alt. Jun. Jul.

c) rigidior: foliis rigidis, complicatis, curvatis latiusculis, 1½ lin. latis culmum superantibus, panicula lucida variegata, nempe flosculis fusco-marginatis, glabris. — In monte calcareo Salomosfelsen prope Coronam Majo 1844.

d) interrupta: panicula basi interrupta, ramulis distantibus, flosculis longius aristatis, arista paleam suam dimidio aequante, foliis rigidis glaucis incurvatis. — In loco eodem ac prior. Mai.

e) gracilis: culmo elato 12 poll., recto, basi folioso; foliis culmo vix brevioribus, complicato-setaceis, striatis, vaginis marcescentibus denique in fila irregulariter solutis; panicula 10—12 spiculata, flosculis stramineo-albis, glabris, panicula 4 lin. longa erecta. — *S. gracilis* Schr. Sert. flor. Transs. 3096. — In subalpinis Transsilvaniae e. g. in monte Öcsim Teteje, in alpibus Kerzechoriensibus ibidem in monte Bulla. Juli 1848.

AMMOCHLOA Boiss.

(Boiss. diagn. XIII. p. 51.)

Spiculae 11—13 florae compressae dense distichae plures ad culmorum apicem in capitula basi glumis involucrata congestae. Glumae binae flosculis breviores ovato-oblongae subinaequales acutae valde inaequaliter carinato-plicatae, carina late alatae uninerves marginibus et carina membranaceae ad medium subcoriaceae, flosculi a basi turgida attenuati acuti oblongi vel lanceolati. Palea inferior ovato-oblonga coriacea quinque nervis concavo-plicata dorso teres inter nervos sulculosa apice in cuspidem subpungentem attenuata margine membrana hyalina sub cuspide superne abrupte desinenti marginata, palea superior hyalina paulo brevior multoque angustior lineari-lanceolata binervis ad nervos carinato-subplicata ciliatula apice truncata. Ovarium ovatum glabrum. Styli 2 apicales in stigmata elongata denticulato-pilosa sub apice flosculi egredientia attenuati. Antherae lineares basi bifidae.

Gramina annua facie Echinariam vel Oreochloam referentia, arenicola. Hoc genus forma glumarum valde inaequaliter plicatarum et quarum carina late alata pro margine ipso anguste subtus occultato absque inspectione accuratiori haberi posset Sesleriaceis adnumerandum est. Sesleria ab eo praeterea differt inflorescentia et habitu diversissimis, spiculis non distichis, flosculis non acutis, palea inferiori non coriacea nec truncato-pluridentata. *Oreochloa* Link spiculis distichis quoque donata flosculis carinato-compressis habitu glumisque diversissimis differt. Dactylis tandem cui priorem speciem botanici plures adnumeraverant caeteris neglectis stigmatibus e basi flosculi egredientibus longissime distat.

1. AMMOCHLOA PUNGENS Boiss. Diagn. XIII. p. 51.

A. glabra, foliis inferioribus anguste linearibus flexuosis, culmeorum limbo dilatato abbreviato obtusiusculo, ligula brevi truncata, culmis nudis folia saepe pluries superantibus tenuibus, palea inferiori inferne hirtula apice in mucronem subrecurvum longiusculum abeunti marginibus sub mucrone in membranam rotundatam saepe fimbriolatam manifestam abeuntibus.

Dactylis pungens Schreb. Gram. 2 tab., 27 fig. In Desf. atl. tab. 16. — *Sesleria echinata* Lam. Ill. tab. 47. fig. 2 (mala!).

Hab. in Barbaria (Desf. Bové! Durieu!).

2. AMMOCHLOA PALAESTINA Boiss. — Diagn. l. c.

A. glabra, foliorum omnium limbo elongato flexuoso anguste lineari apice attenuato ligula brevissima, culmis brevissimis incrassatis inapibus foliis multo superatis, palea inferiori sub lente scabridula in cuspidem brevissimum rectum attenuata marginibus sub apice obsolete membranacea.

Hab. in desertis Palaestinae australis circa Gaza ubi Aprili ineunte unicum specimen legi.

Habitus quodammodo Scirpi Michellani. A praecedenti optime distincta scapis sesquipollicaribus subincrassatis intus vacuis, flosculis apice magis attenuatis in mucronem brevissimum a flosculo non distinctum nec recurvum lineam et amplius longum abeuntibus.

2a. AMMOCHLOA SUBACAULIS Balansa (in pl. Alg. exsicc.) sub Sesleria. Explorat. scient. de l'Alg. II. p. 92.

Dense caespitosa, culmis 1—2" l. foliosis, foliis culmo longioribus planis, palea inferiore in cuspidem brevissimum rectum attenuata. — Coss. Bull. Soc. bot. Fr. I. 317. — *A. palaestina* Boiss. diagn. pl. or. l. c. (Dactylis p. Steud. Synops. p. 428). — *Poa cyperoides* Pourr. ined.) ex Willk. et Lge. Prodr. fl. hisp. I. p. 42.

Hab. in Hispania (prope Barcinonem et ad Cabo de Gata), Africa boreali et Palaestina.

876. POA Linn.

(Walp. Ann. III. 771.)

1. POA ATTICA Boiss. et Heldr. in pl. Graec. exs. 1846. — Boiss. diagn. XIII. p. 52.

P. perennis glabra radice repenti, culmis basi compressis geniculatis dein erectis teretibus laevibus, foliis planis lineari-lanceolatis laevibus, vaginis omnibus glabris supremis limbo longioribus, ligulis omnibus truncatis brevissimis marginiformibus, panicula erecta oblonga ramis erectis strictiusculis scabris inferioribus ternis valde inaequalibus, spiculis 4—5 floris ovatis virentibus rubello variegatis, flosculis basi et ad carinam inferne lana parca protrahenda obsitis caeterum ad margines et 5 nervos prominulos glaberrimis lente punctulatis acutis anguste superne albo-marginatis.

Hab. in oliveto Athenarum ubi cl. Heldr. legit fine Aprilis.

Culmus circa bipedalis, folia inferne circa 2 lineas lata, panicula fere 8 pollices longa. Habitu et spicularum magnitudine affinis P. pratensi quae differt ligula longiori, culmis basi non compressis, paniculae ramis pluribus magis patulis, flosculis obtusiusculis ad dorsum et marginem dense pubescentibus. Accedens prope ad Poam compressam quae culmo rigido tota longitudine compresso, foliis abbreviatis, paniculae ramis brevissimis, flosculis obtusis obsolete nervosis ad margines puberulis longius differt.

1. POA PSYCHROPHILA Boiss. et Heldr. in pl. Anat. exs. 1846. — Boiss. diagn. XIII. p. 57.

P. perennis glabra pallide virens, radice stolones numerosos saepe elongatos edenti, foliis inferioribus rigidulis erecto-patulis siccitate margine subconvolutis lanceolatis acuminatis caulinorum superiorum vagina limbo multo longiori, ligula brevissima rotundata, panicula valde contracta oblongo-lineari pedunculis scabridis strictis inferioribus geminis, spiculis virenti-rubellis subtrifloris ovatis, glumis lanceolatis acutis superiori carina scabrida, flosculis obsolete nervosis dorso margineque dense pubescentibus basi parce lana brevi connexis.

Hab. inter lapides deciduos regionis superioris montis Stavros Pisidiae et Anemas Lycaoniae alt. 6—8000', in regione alpina Olympi Bithyni (Boiss.).

Species P. cenisiae valde et forsan nimis affinis ab ea tamen differre videtur glaucescentia, foliis angustioribus, ligula abbreviata, inprimis panicula valde contracta nec patente angusta, spiculis minoribus, flosculis lana paucieri connexis. An varietas orientalis P. cenisiae?

2. POA ALPINA L. — Steud. Synops. p. 250.

Var. *involucrata* Lge. pugill. I. p. 47. Ligulis foliorum omnium etiam superiorum, brevibus truncatis, panicula folio ipsa panicula parum breviore involucrata. (Forsan modificatio accidentalis etsi specimina numerosa adfuerunt). — Willk. et Lge. Prodr. fl. hisp. p. 81.

Hab. in regione alpina Pyreneor. Hisp. ad Port de Benasque.

3. POA LIGULATA Boiss. (Voy. II. 650. t. 178a.):
Dense caespitosa, culmis 2—6" l. gracilibus subaphyllis, foliis abbreviatis linearibus longe acutatis planis, ligula longissima lata irregulariter profunde fissa paniculae $^1/_2$" densae ramis brevibus geminis; spiculis 5—6-floris 2''' l. ovatis variegatis, glumis trinerviis. — Willk. et Lge. Prodr. fl. hisp. I. p. 81.
Hab. in glareosis regionis subalpinae et nivalis regni Granat. Hispaniae ad 5000—9800'.

4. POA ANNUA L. — Steud. Synops p. 250.
β. *uliginosa* Sándor (sec. Heuff. Verh d. zool.-bot. Gesellsch. zu Wien 1856 p. 290): Panicula subsecunda coarctata; culmis adscendentibus geniculatis; foliis linearibus subito in spicem attenuatis.
Hab. in uliginosis et ad stagnorum margines Banatus Temesiensis.

5. POA STRICTA Lindeberg: Bot. Notis. 1855. p. 10.
Caespitosa. Radix fibrosa, stolonifera. Culmi rigidi erecti 2—3-nodosi, internodiis obtectis, 4—8 pollices alti, basi subcompressi, spice teretes glabri, obscure purpurei. Vaginae etiam obscure purpureae, compressae internodia obtegentes, summa excepta. Ligula $^1/_2$—1 lin. longa, obtusa, lacera vel integra. Folia stolonum plana, linearia, acuta, 1—2 poll. longa, usque ad 2 lin. lata, supra et marg. scabra, demum convoluta. Panicula 1—2 pollicaris, subcontracta erecta vel subnutans; rachis subflexuosa ramis solitariis geminis v. ternis laeves, 1—3 spiculas gerentes. Spiculae flosculis viviparis fere $^1/_2$ poll. longae. Glumae naviculares acutae, superior paullo longior. Flosculi lana parca connexi, fl. inferioris palea infer. carina et nervis lateralibus albo-pilosa; fl. secundi et tertii paleae elongatae solidae, marg. hyalinae dorso nervosae apice in folium 4—6 lin. longum mutatae. — *Poa laxa vivipara* Ands. Gram. p. 45. *Poa cenisia stricta* Hn. Fr. H. N. XV. 94.
Hab. in locis aqua nivali irrigatis alpium Sueciae (Cluskutan) et Norvegiae (Dovre, Kluken etc.) Etiam in ins. Spitsbergen.

6. POA NARATAVICA Bunge (Rel. Lehmann in Mém. prés. à l'Acad. de St.-Pétersbourg VII. 1854. p. 525):
Radice stolonifera, culmo tereti laevissimo, foliis vaginisque glaberrimis, ligula elongata, truncata denticulata, paniculae contractae ramis subgeminis adpressis glaberrimis, spiculis oblongis subtrifloris flore summo saepe tabescente, glumis hyalinis inaequalibus inferiore uni-superiore trinervia glaberrimis, pilis contortuplicatis nullis, paleis subcoriaceis inferiore convexa prominulo quinquenervia extus aequaliter hispidulo-scabra superiorem vix superanti, lodiculis profunde bifidis.
Hab. in alp. Koratau 12. Sept. 1841.
Ab omnibus Pois genuinis differt palearum consistentia fere coriacea, glumisque hyalinis membranaceis. Hac ultima nota, ut etiam habitu quodammodo accedit ad *P. albidam* Turcz, praeter alia paleis membranaceis diversissimam. An forsan aptius Moliniis adnumeranda?
Descript. locupletiorem l. c. vide.

7. POA REUTERIANA Boiss. et Buhse (in N. Mém. de la Soc. des Natur. de Moscou, vol. XII. p. 227).
Perennis caespitosa radice fibrosa culmis basi incrassato-bulbosis, foliis omnibus conformibus anguste linearibus laevibus flaccidis radicalibus confertis culmeis erectis, panicula lanceolata contracta pallida ramis brevibus erectis, spiculis compressis laxiuscule distichis ovatis 9—13-floris rachide breviter villosa, glumis subaequalibus oblongis acutis margine membranaceis dorso trinerviis scabridis, flosculis lanceolatis obtusis, glumella exteriori carinata obsolete 5-nervi, interiori bicarinata ad carinam ciliatula.
Hab. in montibus Jesder prope Máswor, Persia boreali.
Culmi sesquipedales, panicula tripollicaris, flosculi vix 2 lineas longi. Affinis Poae bulbosae, differt foliis elongatis.

8. POA CONFERTA Blytt (Norges Flöra I. p. 128):

Viridis. Radix fibrosa. Culmi simplices, 1—1¼ pedales, teretes glabri, tenuiter striati. Vaginae inferiores emarcidae; superiores teretes, striatae, summae 2 internodiis breviores, quare hoc internodium culmum foliiferum inferiorem longitudine aequans. Ligula lineam elongata, obtusa, lacera. Folia ½—1 lin. lata, 1—2 poll. longa, utplurimum convoluta rigida erecta supra et marg. scabra. Panicula erecta, rigida, 1—2 poll. longa, sub anthesi aperta, oblongo-ovata; rachis angularis, laevis; rami capillares flexuosi, scabri, saepius gemini, simplices et spiculam singulam gerentes v. supra medium 2—3-fidi, 2—3 spiculis terminati. Spiculae ovatae, compressae 2 lin. longae, 3-florae, sub anthesi apertae flosculis dissitis. Glumae inaequales, lanceolatae, carinatae, acutae, dorso rubro-violaceae, 3—5 nerviae, carina scabra. Paleae pallidae flavescentes, inferior obtusiuscula, 5-nervia, carina et nervis intermarginalibus strigosis; inferior angustior.

? *purpurea:* culmo, vaginis et panicula purpurea.

Hab. in alpe Dovre Norvegiae. — Poae Balfourei affinis.

9. POA (DIOICAPOA) TRISTIGMATICA Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 419.

P. caespitosa, culmo fertili pedali, laevi, sterilibus basi vaginis laxiusculis, albidis nitidis tectis; foliis 1—3-pollicaribus, compresso-plicatis, coriaceis, acinaciformibus, pungentibus, extus laevibus; ligula elongata, hyalina; panicula 3-pollicari, contracto-lobata, flavido-rubescente; spiculis (femineis) 3—4-floris, ovatis, 3½—4 lineas longis; glumis ovato-lanceolatis, 3-nerviis, carinatis; pilis lanuginosis apice implexis, flores erectos aequantibus; flore inferiore 3 lin. longo; palea inferiore oblongo-acutiuscula, 5-nervia, nervis 3 basi ciliolatis, basi rubescente, apice flavido; superiore ⅓ minore; staminibus 3; antheris effoetis; ovario 3-gibboso; stigmatibus 3, uno antico, minore, 2 posticis; spiculis (masculis) similibus sed minus lanuginosis.

Hab. in Cordillera de Talcaregue, Chile (Gay); Bahia Duclos; freti Magellanici (Commerson).

10. POA (DIOICAPOA) GAYANA Em. Desv. Gram. chil. in Gay: fl. chil. t. VI. p. 416.

P. caespitosa, lutescens; culmis fertilibus 12—14-pollicaribus, erectis, apice scabris; foliis subcoriaceis, plicatis vel rarius subplanis, apice cartilagineis, scabris; ligula hyalina, oblonga: vaginis scabris: culmis sterilibus fertilibus ⅓ brevioribus, vix tunicatis panicula 4—5-pollicari, contracta, interrupta, obscura: ramis laxiusculis, 1—2 poll. longis; spiculis (masculis) 4—5-floris, 3—3½ lin. longis, ambitu subquadratis; floribus valde patulis; racheos articulis glabris; glumis inaequalibus, acutis, dorso sublaevibus; palea inferiore 2¼ lin. longa, ovato-lanceolata, acuta, 5-nervia, laevi, glabra; superiore ¼ minore, carinis pubescentibus; antheris 3 linearibus.

Hab. in Cordillera de Chili (Gay.).

11. POA CHILENSIS Trin. in Linnaea X. p. 306 (1835). Steudel Synops. p. 258 u 123.

β. (*mascula*) Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 415. Rachi lanuginosa; palea inferiore dorso et ad margines sericeo-ciliata.

Hab. in Andibus Chilensibus; Cordillera de los patos (Gay.).

12, POA ACINACIPHYLLA Em. Desv. Gram. chil. in Gay fl. fil. t. VI. p. 412.

P. pulchra. tota flavescens et glabra, 2—2½-pedalis, robusta, culmos fertiles sterilesque agens; foliis 2—4-pollicaribus, plicatis, acinaciformibus, ad apicem, obtusum cartilagineo-mucronatis; ligula scariosa, producta: panicula nutante, depauperata, 8-pollicari; ramis geminis, 2—6 spiculas gerentibus; spiculis ovatis, 1—3-floris, adjecto pedicello sterili floris alterius 2—3½ lin. longis; glumis ovato-obtusiusculis, inferiore minore, superiore 3-nervia florem basi non lanuginosum, 2 lin. longum aequante; paleis subaequalibus, inferiore ovato-elongata, carinato-subtrigona, obtusissima, 5-nervia, glabra; coryopsi 1 lin. longa; compresso-trigona, lutescente.

Hab. in Chile (Gay n. 1119 Cat. propr.)

13. POA CHORIZANTHA Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 407.

P. rhizomate fibrillis tenuibus obtecto, repente; culmis fertilibus subpedalibus, erectis ultra medium foliatis, foliis planis, laevibus, 1—2-pollicaribus, lineam latis, apice cartilagineo-mucronatis; ligula ovata integra, hyalina; panicula oblonga, laxa, 3—4-pollicari; ramis geminis, $^1/_2$ paniculae attingentibus, spiculas 1—4, primum lanceolatas, deinde floribus patulis ovatas, 4—5-floras, $3^1/_2$—$4^1/_2$ lin. longas gerentibus; glumis obtusissimis, utraque 3-nervia; floribus distantibus, plus minus late ellipticis, sub 2-linealibus; rachi glabra; palea inferiore obtusissima, saepe subemarginata, basi viridula, apice straminea, 5-nervia, nervis 3 inferne ciliatis; antheris linearibus.

Hab. in Chile (Gay).

14. POA VALDIVIANA Ph. Linn. XXIX. 97.

P. perennis, dioica; culmis gracilibus, filiformibus 1—$1^1/_2$-pedalibus, strictis, 2—3-nodibus; internodio ultimo longissimo, ante paniculam scabriusculo; foliis anguste linearibus, convolutis, strictis; ligula brevissima, truncata; panicula angusta, contracta, sublobata, $2^1/_2$—3-pollicari, ramis erectis, ad summum 6 lin. longis, scabris; spiculis foemineis 2—$2^1/_2$ lin. longis, lanceolatis, quadrifloris, omnino scabris; flosculis appressis; glumis ovato-lanceolatis, inferiore uninervia, superiore trinervia; paleis subaequalibus, oblique truncatis, trinerviis, ante apicem scariosum violaceis; palea superiore ovata, margine dense ciliata, vix $^1/_3$ breviore.

In prov. Valdivia, loco los Pantanos dicto praedii mei S. Juan inveni.

15. POA LATIFOLIA Ph.*). l. c.

P. perennis, dioica; culmis tripedalibus; foliis radicalibus ultra pedem longis, 6 lin. latis, margine et nervo mediano scabris, sensim in apicem peracutum desinentibus; ligula brevi, truncata, lacera; panicula 10 poll. longa, satis densa; ramis quaternis, multifloris; spiculis 4 lin. longis, quadrifloris; glumis subaequalibus, spiculam subaequantibus acutis, margine scariosis; inferiore uninervia angustiore, acuta: superiore trinervia, obovato-oblonga; floribus foemineis basi pilosis; palea inferiore glumae superiori omnino aequali, sed distincte 5-nervi, in nervo mediano scaberula, caeterum glabra; superiore angusta acuta.

In monte Cerro de Chonos ad circa 1290 ped. s. m. legit cl Dr. Fonk.

16. POA CHONOTICA Ph. l. c.

P. perennis, dioica; culmo $1^1/_2$—2-pedali, usque ad medium foliato; foliis complicatis, subfalcatis, excepto margine laevissimis; radicalibus strictis erectis, vagina alba, nitida, et lamina modo 5 poll. longa, 4 lin. lata compositis; caulinis sensim decrescentibus, lamina ultimi modo pollicem longa; ligula brevi, truncata, lacera: panicula erecta, oblonga, 5-pollicari; ramis ternis binisve; spiculis $3^1/_2$ lin. longis, 2—3-floris, fere ut in priore, sed paleae medio violaceae, basi latiores et apicem versus angustatae.

Cum priore lecta est. Folia et basis culmorum fere ut in Poa robusta Steud.

17. POA VIOLASCENS Ph. Linn. XXIX. p. 100.

P. perennis? caespitosa? foliis radicalibus....; culmis erectis, gracilibus, superius nudis: foliis culmeis distantibus, brevibus, una cum vaginis glabris; ligulis elongatis; panicula contracta $1^1/_4$—$1^1/_2$ poll. longa: ramis binis ternisve, brevibus, laevissimis; spiculis pedicello suo longioribus. $2^1/_4$ lin. longis, ovatis, 3—4-floris; glumis ovatis, acutis, violaceis, fere $1^1/_2$ lin. longis; palea inferiore glumam vix superante, ovata acuta, viridula, superius fulva, margine hyalina, trinervia, in carina et nervis lateralibus, margini approximatis longe et lanuginoso-ciliata, rhachide glabra.

Prope Arauco invenit cl Gay. Herb. Chil. no. 161. — Culmi 15, omnes parte radicali carentes, suppetunt; 9—11 poll. longi sunt, sed nodis duobus modo constant; ultimum internodium 5—6-pollicare; vaginae circa tertiam internodii partem occupant, folium antepenultimum 11 lin. longum, $1^1/_2$ lin. latum. — Differt a P. holciformi, qua-

*) Obs. *Poa latifolia* Forster est *Centotheca* Desv., *P. latifolia* Pohl vero *sudetica* Haenke.

cum spiculis violaceis convenit, culmo superius nudo etc.; a stenantha culmo laevissimo, spiculis ovatis, a chorizantha spiculis trifloris, nec 4—5-floris, glumis, paleaque inferiore acutis.

18. POA TENERA Mueller (Mss. Ex Hook. fil. Fl. Tasm. vol. II. p. 124. tab. 164 A.):

Debilis, glaberrima v. scaberula, culmis ramosis tenuibus foliosis, foliis angustis planiusculis, ligula mediocri membranacea, panicula effusa. ramis capillaribus paucifloris, spiculis parvis pallidis 3—5-floris, floribus remotis, palea inferiore obtusa 5-nervi dorso marginibusque pubescente basi nuda v. parce barbata.

Hab. in silvis locisque obscuris Tasmaniae et Victoriae in Nov. Holl. vulgaris.

Gramen quam P. australis gracilior, ligula membranacea optime distincta. — Culmi 1—8-pedales, saepe flaccidi scandentes. — Non esse potest P. laxicola Br., ut credidit Nees.

P. saxicola Br. (prodr. 180). — Steud. Synops. p. 262. — Hook. fil. Fl. Tasm. v. II. p. 124. tab. 164 B.

Hab. in Tasmania: Mount Wellington (Gunn).

19. POA AUSTRALIS Br. (prodr. 179):

Rigida, scabra v. glaberula v. polita, culmis dense caespitosis foliis setaceo-involutis filiformibusve longioribus v. aequilongis, ligula brevissima, panicula effusa varius contracta, ramis paucifloris inferioribus capillaribus, glumis scabris 3—7 floris, floribus remotis approximatisve palea inferiore 5-nervi apice scariosa obtusa basi plus minusve lanata v. nuda. — Hook. fil. Fl. Tasm. II. p. 123. Steud. Synops. p. 262. — *P. laevis* R. Br. Prod. 179. Steud. l. c. — *P. plebeja* R. Br. et Steud. l. c.

Var. α. *Billardieri*: 1—2-pedalis, glaberrima, polita, culmis inferne ramosis foliis spithamaeis tereti-involutis longioribus aequilongisve, panicula lanceolata contracta spiculis confertis majusculis, glumis acutis floribusque 5 approximtis scabris basi parce lanatis. (Descript. ab exempl. Labillard.) — Arundo poaeformis Lab. Fl. Nov. Holl. I. 27. t. 35. Cfr. P. Labillardieri Steud. Synops. p. 262" vix videtur P. australis varietas ramosa prolifera".

Var. β. *monticola*: glaberrima v. scaberula, culmis brevibus densissime caespitosis, pedalibus foliis setaceo-involutis longioribus, panicula ovata subcontracta v. effusa, spiculis majusculis 3—7-floris, glumis acutis floribusque remotis scaberulis, palea inferiore subtruncata purpurea marginibus albis apice saepissime membranacea basi parce villosa v. nuda. — *P. laevis* Br. prodr. l. c. Steud. Synops. l. c. (Gunn 1466.)

Var. γ. *Sieberiana*: scabrida v. glaberrima, foliis setaceis filiformibus culmo aequilongis longioribusve, panicula ovata contracta v. effusa, ramis inferioribus capillaribus elongatis, spiculis parvis purpureis viridibusve 3—6-floris, glumis flosculisque remotis glabratis v. scaberulis, palea inferiore oblonga v. lineari basi parce lanata rarius nuda. *P. Sieberiana* Kunth, fide Nees in Herb. Lindl. *P. effusa* Nees in Hook. Lond. Journ. Bot. II. 418. Steud. Synops. l. c. (Gunn. 596. 1010. 597).

Var. δ. *capillifolia*: scabrida v. glaberrima, foliis capillaceo-setaceis culmo brevioribus, panicula contracta v. rarius effusa, ramis inferioribus capillaceis elongatis, spiculis viridibus parvis 3—6-floris. glumis flosculisque remotis scaberulis, palea inferiore oblonga v. lineari basi nuda. (Gunn. 596, 1469, 1468, 1470).

Hab. in omni Tasmania, in Nova Hollandia extra tropicali et in Nova Zelandia. Var. α. in ripis marinis locis arenosis, Var. β. in cacumine montium ubi vulgo pascitur; Var. γ, δ. omnium vulgatissimae.

Huc etiam forsitan pertinet *Poa affinis* Br. = P. australis β. Nees l. c. Modificationes extremae sunt: (1) α. Gramen totum glabrum, lucidum, robustum, culmo 2-pedali, spiculis villosis confertis, (2) var. δ. gramen densissime caespitosum, saepe vix digitale, foliis setaceis, panicula capillari, spiculis parvis fere glabris, viridibus flosculis medio remotis. Inter quas formae intermediae numerosae, exacte ut in *Festuca ovina* europaea.

20. POA ANCEPS Forst. (Prodr. 43) Hook. fil. fl. New Zeal. p. 306. Steud. Synops. p. 263. *P. australis* A. Rich. Fl.; All. Cunn. Herb. et Prodr.

α. *elata*: 2—3-pedalis, foliis planis culmo longioribus coriaceis, panicula effusa vel contracta, spiculis majusculis 6-floris, flosculis remotis patulis, glumis subacutis.

β. *foliosa*: foliis distichis confertis angustioribus planiusculis vel carinatis culmo longioribus; panicula contracta elongata, ramis suberectis, spiculis minoribus 2—5-floris ovatis, flosculis approximatis, glumis latiusculis.

γ. *brevicùlmis*: culmis brevibus compressis, foliis distichis culmo brevioribus curvis coriaceis latiusculis acutis, panicula parva ovata ramis brevibus, spiculis brevibus ovatis 3—4-floris, flosculis confertis, glumis brevibus acutis, palea infer. lata.

Hab. in Nova Zelandia copiose.

21. POA AFFINIS Br. Prodr. 179. — Steudel Synops. p. 262. Hooker fil. Fl. New Zeal. p. 307. *P. caespitosa* Forst.? Prodr. RS. p. 536. Sprengel in Mém. Acad. Petrop. 1810 p. 302. Steud. Synops. p. 263.

α. *multiflora*: panicula effusa, glumis 4—6-floris flosculo brevioribus.

γ. *agrostidea*: saepius scaberula, panicula contracta, glumis 1—2-floris flosculo longioribus. — An Agrostis rigida A. Rich. Fl.?

Hab. in Nova Zelandia: Northern Island. Var. α. Hawky bay (Colenso); var. β. Akuriri (Colenso), Great Barrière Island (Sinclair).

22. POA LAEVIS Br. (Prodr. 179). — Steudel Synops. p. 262. Hook. fil. Fl. New Zeal, p. 307.

α. *brevifolia*: parvula, glaberrima, culmis foliis longiore, panicula elongata effusa.

β. *filifolia*: culmis foliis filiformibus aequilongis vel longioribus, panicula elongata, spiculis ramis inferioribus subspicatis.

Hab. in Nova Zelandia: Northern et Middle Islands: in campis Taupo, in montibus Ruahine etc. (Colenso), Otago (Lyall), in campis Aglionby (Monro). Var. β. Akaroa (Raoul); Taupo et Tarawera (Colenso).

Ic. add.

POA (ERAGROSTIS) OXYLEPIS Torr. (*Poa interrupta* Nutt.)
Torrey bot. of the explor. of the Red River of Louisiana (1852) p. 301. tab. XIX.

POA GENICULATA Dur.
Explor. scient. de l'Alg. tab. 40. n. 4.

876b. ERAGROSTIS Palis.

(Knth. en. I. p. 327.)

1. ERAGROSTIS TRICHOPHORA Coss. et Dur. (Bull. de la Soc. bot. de France 1855 p. 311).

Planta perennis, caulibus inferne saepe prostratis et ad nodos radicantibus ad nodos plus minus flexuosis, rarius rectiusculis erectis saltem in parte inferiore paniculae longe pilosis; foliis planis, arefactione saepe canaliculato-subinvolutis, inferioribus pilosis, superioribus glabrescentibus; vaginis saltem inferioribus pilosis, ore barbatis panicula ramosa, undique effusa, ramis saltem inferioribus subquinis subverticillatis, rarius barbulatis; spiculis minutis sub anthesi virescenti nigrescentibus plerumque pedicellum subaequantibus, ovato-oblongis vel oblongo-linearibus, 2—6-floris, floribus obtusiusculis, glumella inferiore late ovata, obtusa, nervis lateralibus vix prominulis caryopsi ovato-oblonga. — Nov. floret.

E. geniculata DR. in Explor. sc. Alger. t. 40. f. 4. non Nees.

Hab. ad vias in cistetis et ericetis sylvarum arenosarum Algeriae prope La Calle! In Abyssiniae montibus etiam a Schimper lecta.

2. ERAGROSTIS AMABILIS Steud. nomencl. bot. (*Poa amabilis* L., Kunth. agr. p. 334.) Büse in plant. Jungh. III. p. 348.

Valde polymorpha, transitus tamen exhibens ita evidentes, ut vix semper sequentes possim rite distinguere varietates caeterum conspicuas.

α. *effusa:* paniculae effusae pyramidalis ramis ramulisq. 9. long., glabr., capillarib.; spiculis igitur longius pedicellatis, 10—30 floris; culmo erecto. — Hab. Javam pr. Buitenzorg, Bataviam (Jungh.).

β. *scabriuscula:* paniculae subeffusae ovatae, ramis longis ramulisque scabriusculis, spiculis modice pedicellatis 10—20 floris, culmo erecto. — Hab. insulae Javae atque Sumatrae (Jungh.).

γ. *prostrata:* pan. subeffusae, ovatae, ramis longis ramulisque brevibus scabriusculis, spiculis modice pedicellatis 10—30 floris, culmo longo prostrato, radicante. — Zoll. n. 232 in herb. Acad. Lugd. Bat. — Ins. Java pr. Magelang, Jogjakerta (Jungh.).

δ. *contracta:* panic. contractae lobatae ramis ramulisque brevib. glabris, spiculis igitur breve pedicellatis, 10—60 floris, culmo prostrato radicante. — In arenosis ins. Javae et Sumatrae.

3. ERAGROSTIS MEGASTACHYA Lk. — Steud. Synops. p. 263 sub n. 3.

E. thyrsiflora Wk. (Prodr. fl. hisp. I. p. 83): Spiculae 3—7‴ l., 12—30-florae in thyrsum oblongum congestae.

Hab. in agro Madritensi Hispaniae. — ⊙

4. ERAGROSTIS POAEOIDES PB. Sill. t. Panamaflora.

Mühlenbergia tenella Tr.
Leptochloa mucronata Kth.
L. pellucidula Steud.
Digitaria setosa Desv.
Panicum Hamiltoni Kth.
Panicum pilosum Sw.
P. brevifolium L. β. *filamentosum* Pers.
Setaria glauca PB.

876/₁. DISTICHLIS Rafin.; Desv.

(Rafin. Prodr. Nov. Gen. in Journ. phys. LXXXIX. p. 104. — Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 395.)

Spiculae dioicae, compressae, multiflorae, floribus arcte imbricatis. Glumae flore contiguo paulo breviores, acutae. Paleae 2, subaequales, inferior carinato-convexa, coriacea, 7—9-nervia, ovata, acuta v. obtusiuscula, mutica; superior saepe longior, basi dilitata, truncata, carinis rectis, parallelis. Squamulae 2, carnosae, truncatae. Stamina 3, in foemineis effoeta. Ovarium glabrum, apice attenuatum. Styli terminales basi subconnati, longe nudi. Stigmata breviter plumosa. Caryopsis elliptica, apicata, a latere compressa, turgide biconvexa, postice exsulca, antice area embryonali $^1/_3$ ipsius attingente praedita, pericarpio crassissimo, superficie duro et rugoso, intus valde spongioso, albumen farinaceum sphaeroidale arcte cingente donata.

Hoc genus multis notis a gen. *Poa* est diversum; ad Aeluropum Trin. (Brizopyrum Lk.) appropinquatur, a quo tamen bene differt caryopside singulari. Etiam Uniolae affine. Praeter *Poam distichophyllam* Br., *P. scopariam* Kth. et *Brizopyrum boreale* Presl. huc refert Desvaux sequentes species chilenas:

1. DISTICHLIS THALASSICA. — Poa HBKth., Knth. Gram. I. 337. — Megastachya RS. Syst. II. 590. — Uniola Trin. Act. petr. 6. I. 359. Steud. Synops. p. 281. n. 8.

2. DISTICHLIS MARITIMA Raf. — Poa Michauxii Kth. Gram. I. 111. et II. 533. Agr. Syn. I. 325.

3. DISTICHLIS PROSTRATA. — Poa HBKth., Kth. Gram. II. 461. Steud. Synops. p. 281. n. 6. — Agrostis pungens Bertero mss. n. 785.

878. GLYCERIA R. Br.

(Walp. Ann. III. 873.)

1. GLYCERIA PLICATA Fries. — Steud. Synops. p. 284.

β. *spicata* Lange (Pugill. I. p. 45). Differt a forma typica praecipue ramis brevioribus, palea superiore inferiorem superante et extra eandem exserta. — Willk. et Lge. Prodr. fl. hisp. I. p. 78.

Hab. in Hispania ad Benavente in Castill. vet. ad ripas fl. Manzanares Madriti et pr. Guadarrama Lge. — Etiam in Corsica et Sicilia.

2. GLYCERIA STRICTA Hook. fil. (Fl. New Zeal. p. 301):

Glaberrima; culmis caespitosis strictis foliosis, foliis brevibus strictis involutis, panicula stricta erecta contracta, ramis pedicellisque brevibus strictis, glumis inaequalibus acutis, superiore 3-nervi, flosculis 6—14 confertis, palea inferiore glaberrima acuta coriacea, nervis inconspicuis, squamula oblonga. — Hook. fil. Fl. Tasm. vol. II. p. 123. tab. 162 B.

Hab. in Nova Zelandia, Middle Island: Akaroa (Raoul); in Tasmania in palude prope Launceston (Gunn.) et in Victoria Nov. Holl. — Floret Novemb.

Culmi $1\frac{1}{2}$—2 pedales, validi; vaginae foliorum longae, subdilatatae, lamina brevis 2—4 pollices longa; panicula 4—6 pollicaris, sat gracilis.

3. GLYCERIA FLUITANS var. STRICTA Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 390.

G. panicula 15-pollicari, stricte erecta, angusta, pallida, ramis inferne 5—6-verticillatis, a basi spiculas subsessiles gerentibus, erectis; spiculis linearibus, nonnunquam subarcuatis, 11—15-floris; glumis inaequalibus, ovato-oblongis, superiore florem contiguum aequante; floribus elliptico-elongatis, $1\frac{3}{4}$—2 lin. longis; palea inferiore (explanata) ovato-elliptica, apice scarioso-obtusissima, valide 7-nervia, superiore subaequali, elliptica, utrinque attenuata, carinis anguste marginatis; antheris $\frac{2}{5}$ lin. longis.

Hab. ad Quillota regni Chil. (Bertero. n. 1210).

Proxima est *Gl. plicatae* Fr.

4. GLYCERIA (CATABROSA) AQUATICA Presl. Steud. Synops. p. 286.

β. *latifolia* Heuff. (Verhandl. d. zool.-bot. Gesellsch. zu Wien 1858 p. 231): valva inferiore minima oblonga, apice eroso-emarginata; panicula conferta multiflora, deflorata divaricata; foliis planis nervosis, margine serrulato-scabris, culmo plus duplo latioribus.

Hab. in Banatu Temesiensi.

881. CATABROSA Palis.

(Walp. Ann. I. 910.)

CATABRŎSA TENUIFOLIA Presl. in Rel. Haenck. I. 256. Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 392. tab. 81. f. 2. — *Glyceria (?) tenuifolia* Steud. Synops. p. 286. n. 31.

$881/_1$. ATROPIS Rupr. Fl. Samoj. p. 64.

ATROPIS MAGELLANICA Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 391. — *Catabrosa magellanica* Hook. fil. Fl. Ant. I. p. 387.

A. pedalis, erecta, glaberrima, foliis involutis; ligula ovata, acuta; vaginis inferne laxis; panicula 5—7-pollicari, elongata; ramis elongatis, gracilibus; spiculis oblongis, 4—6-floris, 4—6-linealibus; floribus distantibus; subcylindraceis; paleis aequalibus, inferiore angusta, elongata, in apicem obtusum attenuata, $1^3/_4$—2 lin. longa, praeter callum brevissimo extus pilosum glaberrima.

Hab. ad fretum magellanicum, Puerto del Hambre (King).

882. COELACHNE R. Br.

(Knth. en. I. 370.)

COELACHNE INFIRMA Büse. — Büse in pl. Jungh. III. p. 350.

Paniculae angustae ramis subsolitariis remotis, spiculis virgineis lanceolatis; glumis dimidia spicula breviorib., fl. pedicellato pubescente, f. lanceolatis parvis, culmo b. decumbente debili.

Hab. ins. Javae in locis paludosis m. Diëng alt. 6200'. (Jungh.)

Culmi decumbentes, mox erectae etc.

$883/_1$. RHOMBOELYTRUM Link. Hort. II. p. 296. Em. Desv. Gram. Chil. in Gay fl. chil. t. VI. p. 386.

Spiculae 4—7-florae, biconvexae, subrhomboideae, utrinque attenuatae. Flores arcte disticho-imbricati. Rachis articulata. Glumae 2, aequales, carinato-concavae, 3—5-nerviae, muticae, spiculam dimidiam aequantes vel superantes. Paleae 2; inferior carinato-concava, apice emarginato-biloba, inter lobos obtusos mucronulata, ad basim callosam pilosa, oblique 3—7-nervia; superior aequilonga vel minor, carinis ciliatis ante apicem truncatum evanescentibus. Squamulae 2, integrae. Stamen 1. Ovarium glabrum Styli 2, breves. Stigmata breviter plumosa. Caryopsis oblongo-obovata, compressa vel compresso-triquetra, hinc vix sulcata, hilo punctiformi.

1. RHOMBOELYTRUM BERTEROANUM Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 387. pl. 81. f. 1.

R. caespitosum, erectum, $1^1/_2$-pedale et ultra; foliis angustis, scabriusculis; ligula brevi, truncata; panicula rigida, 1—$3^1/_2$-pollicari, subspiciformi-contracta, subinterrupta, pallide viridi; spiculis compressis elliptico-acutis v. rhomboideis, 4—6-floris, $2^1/_4$—$2^1/_2$ lin. longis; floribus arcte imbricatis; glumis subaequalibus, elliptico-elongatis, obtusis trinerviis; rachi glabra; paleis subaequalibus, $1^1/_2$—$1^1/_2$ lin. longis; inferiore elliptico-elongata, scabrida, oblique 3- sub 5-nervia, ad callum tantum breviter pilosa, obtuse emarginata, mucronulata; superiore lanceolato-attenuata, apice hyalino ultra carinas ciliatas producto; stamine 1; caryopsi convexo-subtrigona.

Hab. ad Quillota (Bertero. n. 947).

2. RHOMBOELYTRUM RHOMBOIDEUM Link Hort. II. p. 296. — Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 386. tab. 81. f. 3.

R. erectum, culmo apice scabro; foliis scabris; ligula ovali; panicula angusta, contracta, 4-pollicari; ramis adpressis; spiculis late rhomboideo-ellipticis, biconvexis, obtusis, 3 lin. longis, 6—7-floris, clausis; floribus arctissime imbricatis; glumis aequalibus, spicula $^1/_2$ tantum brevioribus, carinato-navicularibus, 5-nerviis; rachi glabra; palea inferiore 2—$2^1/_2$ lin. longa, concava, late elliptica, apice inter lobos obtusos mu-

crenulata, 9-nervia, nervis lateralibus obliquis, ad margines utrinque ad medium usque incrassatos et ad callum pilosa, superficie puberula; palea superiore $1^1/_2$-lineali, ovali; caryopside obovata, compressa.

Hab. ad Rancagua, Chili (Bertero n. 277).

884. CHASCOLYTRUM Desv.

(Knth. en. I. p. 373. suppl. 308.)

1. CHASCOLYTRUM STRICTUM Em. Desv. Gram. chil in Gay fl. chil. t. VI. p. 384.
   Calotheca stricta W. J. Hook. Bot. Beech. Voy. Chil. p. 50. Steud. Synops. p. 284 n. 23. — *Briza erecta* Trin. in Linnaea X. p. 307. non Lamk.! — *Chascolytrum subaristatum* Poepp. mss. in Herb. Monacensi non Desv.

2. CHASCOLYTRUM TRILOBUM Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 383.
   Briza triloba Nees ab Esenb. Agr. Brasil. p. 482. Steud. Synops. p. 283. 14. — *Calotheca triloba* Kunth Agr. Syn. p. 374.

887. MELICA L.

(Walp. Ann. III. 774.)

1. MELICA HUMILIS Boiss. voy. p. 662. t. 177.
   Culmis humilibus, f. strictis rigidis, ligulis subnullis, panicula subsecunda, glumis ovato-lanceolatis, spiculis trifloris, flosculis superioribus sterilibus aequilongis in corpusculum pyriforme truncatum tuberculosum accretum, flosculi inferioris glumella exteriori acuta tota superficie longe ciliata, interiori obtusa margine breviter pubescente.

   In rupib. reg. alp. Sierra de Gador pars superior, ad margin. planitiei superioris. Alt. circa 6000'. — Fl. Aug.

2. MELICA HUMILIS Boiss. (Voy. II. 662. t. 177):
   Stricta, culmis $^1/_2$' l., foliis convoluto-setaceis strictis, ligula truncato-lacera utrinque longe decurrente, thyrsi cylindrici laxi non interrupti spiculis trifloris floribus sterilibus in corpusculum cylindricum pyriformi-truncatum tuberculosum accretis, palea inferiore tota superficie longe ciliata. — Willk. et Lge. Prodr. fl. hisp. I. p. 86.

   Hab. in Hispania, in reg. alpina regni Granat. (Sierra de Gador ad 6000': Boiss.) ♃. Aug.

3. MELICA MICRANTHA Boiss. et Hoh. in pl. Kotsch. Pers. bor. 1846. — Boiss. diagn. XIII. p. 53.
   M. glaucescens culmis elatis laxe foliosis glabris, vaginis multistriatis retrorsum scabridulis, limbo anguste lineari subtus glabro laeviusculo superne sub lente adpresse tomentello, ligula oblonga acutiuscula, panicula spiciformi angusta laxa interrupta, pedicellis strictis brevissimis apice subscabridis, spiculis brevissimis pallidis, glumis membranaceis laeviusculis oblongis acutis superiori quarta parte longiori angustiorique flores superanti, palea inferiori flosculi hermaphroditi oblongo-lanceolata obtusiuscula margine pilis flavidis ejus diametro longioribus dense ciliata dorso scabridula interiori paulo breviori glabra, flosculis neutris binis corpusculum pedicellatum turbinatum truncatum flosculo fertili brevius formantibus.

   Hab. in faucibus montis Elbrus prope Derbend Kotsch. n. 435.

   Culmi 2—3-pedales, spica 2—3 pollices longa 4—5 lineas lata, spiculae 2 lin. tantum longae dimidio minores eis M. ciliatae quae nostrae magis affinis praeter florum magnitudinem paniculamque longiorem densiorem egregie differt glumis longe acuminatis, paleae pilis albis nec flavidis spiculam longe nec breviter superantibus, flosculorum neutrorum corpusculo oblongo acuto.

4. MELICA CRETICA Boiss. et Heldr. in pl. Cret exs. 1847. — Boiss. diagn. XIII. p. 54.

M. caespitosa, culmis nanis parce foliosis glabris laevibus, foliis rigidulis brevibus convolutis filiformibus extus laevibus intus brevissime sub lente hirtellis, ligula truncata sublacera glabra, panicula spiciformi simplici oblonga laxiuscula, pedicellis strictis scabridulis spicula subbrevioribus, glumis membranaceis flavidis rubellisve ovato-oblongis acutis laeviusculis inferiori paulo breviori latiorique, palea inferiori flosculi hermaphroditi oblongo-lanceolata acuta margine pilis albidis ejus diametro longioribus spiculam superantibus dense ciliata dorso scabrida, superiori breviori ad margines ciliatula, flosculis neutris binis corpusculum oblongum laeve pedicello aequilongo suffultum flosculo fertili brevius formantibus.

Hab. in saxosis cacuminis Hagios Theodoros montium Sphacioticorum alt. circ. 7000' rara (Heldreich), in regione superiori Libani supra Cedros (Boiss.).

Culmi cum floribus 3—4 pollices tantum longi, spicae simplices pollicem aut paulo amplius longae, spiculae lin. $2^1/_2$ circ. longae. Species nana hoc charactere *M. hispanicae* Boiss. Voy. Hisp. accedens quae ab ea foliis minus angustis convolutisque facie superiori glabris, spiculis majoribus, corpusculo neutro turbinato-pyriformi truncato distinguitur. Specimina Libanotica Creticis optime congruunt.

5. MELICA HOHENACKERI Boiss. — Boiss. diagn. XIII. p. 54.

M. culmis ascendentibus elatis glabris foliosis, vaginis foliorum inferiorum pilis longis mollibus deflexis hispidis 1—2 superiorum glabris, limbo omnium rigido lineari siccitate convoluto glabro scabriusculo, ligula brevi fimbriato-lacera, panicula spiciformi composita laxa angusta interrupta, pedunculis pedicellisque strictis laeviusculis, glumis pallide rubellis lanceolatis acutis laeviusculis carina subscabridis flosculos superantibus superiori paulo breviori, palea inferiori flosculi hermaphroditi lanceolata acuta dorso undique pilis longis spiculam aequantibus hirsuta, interiori paulo breviori lineari apice rotundata margine scabridula, flosculo neutro unico longe pedicellato anguste oblongo-lineari laevissimo.

M. Persica Hohen. Talüsch. Enum. non Kunth. — *M. Persica* β. *Caspica* Griseb. gram. Ross.

Hab. in districtu Talüsch prov. transcaucasicarum (Hochstetter).

Planta $1^1/_2$—2 pedalis, spica 4—5 pollicari angusta, spiculis $3^1/_2$ lin. longis. Haec est de qua in diagnosibus *M. inaequiglumis* et *breviflorae* sermonem feci et quam ex auctoritate Botan. Rossicorum pro M. Persica habui quam nunc icone Kunthiana collata diversissimam comperi foliis omnibus cum limbo pubescenti-villosis, glumis valde inaequalibus, flosculis neutris pluribus imbricatis flosculum turbinato-truncatum scabridum formantibus. Ad hanc *M. Persicam* Kth. veram referenda est *M. Kotschyi* Hochst. in Pl. Kotsch. Kurdist. Nostra *M. Hohenackeri* prope *M. Cupani* Guss. collocanda est ab ea vaginis inferioribus eximie et deflexe hirsutis, flosculo neutro unico nec pluribus, aliisque notis distinctissima.

6. MELICA PANNOSA Boiss. — Boiss. diagn. XIII. p. 55.

M. caespitosa culmis pumilis basi geniculatis dein erectis foliosis adpresse velutinis, foliis omnibus ad vaginas et limbum densissime et brevissime tomentosis argyreo-sericeis, limbo patenti plano lanceolato attenuato-acuminato, ligula marginiformi brevissima, spicis oblongo-cylindricis terminalibus densis, spiculis subsessilibus, glumis membranaceis stramineo-rubellis acutis glabris inferiori ovato-oblonga triplo breviori superiori lanceolata, flosculi hermaphroditi palea inferiori pilis albis glumam aequantibus undique dense hirsuta, superiori paulo breviori angustiori obtusa margine ciliatula, flosculis neutris binis pedicellatis imbricatis apice truncatis valde scabrido-aculeatis interiori multo breviori.

Hab. in rupibus calidis Antilibani ad Souk Wadi Barrada, legi Maio 1846.

Semipedalis vel paulo longior, foliorum limbus 2—3 pollicaris, spicae sesquipollicares, spiculae $3^1/_2$ lin. longae. Affinis *M. Persicae* Kth. Gram. tab. 89 quae ex icone differt indumento multo minus denso et pannoso, spica laxa, spiculis longe pedicellatis,

flosculis neutris aequilongis. M. Kotschyi Hochst. quae probabiliter eadem ac M. Persica iisdem notis ligulaque elongata distinguitur. *M. vestita* Boiss. denique spicis laxis, foliis angustioribus minus denso hirsutis, flosculo neutro cylindrico laevi differt.

7. MELICA ELIGULATA Boiss. l. c. p. 56.

M. caulibus ascendentibus elatis foliisque densissime et adpresse tomentellis subscabridis, limbo plano lanceolato erecto-patulo longe attenuato subulato, ligula prorsus nulla, panicula spiciformi cylindrica subcomposita densa pedunculis pedicellisque strictissimis hisce spicula multo brevioribus, glumis membranaceis pallide stramineis acutis inferiori ovata superiori triplo longiori lanceolata, palea inferiori flosculi hermaphroditi dorso undique pilis niveis glumam superantibus dense hirsuta, superiori breviori lineari obtusa margine retrorsum ciliatula, flosculo neutro pedicellato lineari-cylindrico laeviusculo.

Hab. in Persia boreali loco non indicato (Kotschy n. 718).

Pedalis, spica bipedalis et longior, spiculae 4 lin. fere longae. Indumento et spica densa affinis praecedenti a qua differt indumento minus denso non sericeo, ligula nulla, flosculo neutro solitario cylindrico etc. A M. Kotschyi et vestita quoque ligulae deficientia, spica densa, spiculis breviter pedicellatis distincta.

8. MELICA RECTIFLORA Boiss. et Heldr. in pl. Cret. exc. 1847. — Boiss. diagn. XIII. p. 56.

M. glaberrima caespitosa cauliculis erectis ramosis nigricanti-rubellis, culmis erectis foliosis, foliis planis lanceolato-linearibus erectis strictis apice attenuatis praeter marginem remote et obsolete scabridulum laevibus, ligula marginiformi vix perspicua in dentem ovatum oppositifolium culmum amplectentem producta, panicula in spicam erectam anguste linearem laxam contracta, pedunculis pedicellisque strictissimis laevibus hisce spicula brevioribus saepe subnullis, glumis pallide stramineis oblongo-linearibus acutiusculis vix inaequalibus flosculos aequantibus, flosculo fertili unico, palea inferiori glabra elliptico-lineari obtusiuscula sulculoso-nervosa coriacea interiori elliptico-lineari vel elliptica obtusa subcoriacea ad 2 nervos carinantes superne ciliolata, flosculo neutro longe pedicellato ovato-pyriformi truncato flore vix breviori.

Hab. ad rupes prov. Sphakiae Cretae in fauce Hagio Rumeli. Fl. Aprili (Heldr.)

Planta 6—11-pollicaris, foliorum limbus 3—4-pollices longus basi linea una paulo latior, spica 1—2-pollicaris angustissima, spiculae illis M. *uniflorae* fere dimidio minores. Huic speciei flosculo fertili unico affinis ab ea differt ligulae forma, spiculis non longe pedicellatis, glumis angustis etc. Habitu et spicularum magnitudine magis affinis M. *virgatae* Turcz. quae spiculis multifloris aliisque notis longius distat.

9. MELICA FILICULMIS Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 378.

M. rhizomate bulboso-incrassato culmos filiformes, flagelliformes, steriles fertilesque apice tantum foliatos agente; foliis approximatis, convoluto-filiformibus; panicula lineari, rigida, 2—3-pollicari; ramis 1—7, spiculas 3—4-floras flore unico tantum fertili gerentibus; glumis inaequalibus; inferiore amplissima, obovato-rotundata 3½—4 lin. longa, 3½ lin. lata, 7-nervia, fulvo-violacea, apice albida; superiore triplo angustiore, paulo minore, floris inferioris gluma superiore subbreviori, 2½ lin. longi, palea inferiori, 11—13-costato-nervia, tuberculata, rubrofusca, ciliis fulvis margine hirta, ad apicem scariosum bifida; superiore paulo breviore, obtusissima.

Hab. in Chile (Gay).

10. MELICA PAECILANTHA Em. Desv. Gram. chil. in Gay fl. Chil. t. VI. p. 379.

M. caespitosa, culmis anni praeteriti culmos fertiles sterilesque, strictos, 10—14-pollicares, basi polyphyllos agentibus; foliis plicatis vaginisque hirtis scabrisque; panicula lineari, rigida, sub—3-pollicari, picta; ramis adpressis, spiculas 1—6-apertas, 5—5½ lin. longas, 3—5-floras floribus 2—3 fertilibus gerentibus; glumis inaequalibus inferiore minore, oblonga, 4 lin. longa, 1¼ lin. lata, 3-nervia; superiore obovato-elongata, 4½—5 lin. longa, basi attenuata, 5-nervia, dorso violacea, apice albido-scariosa; floris inferioris glumae superiori aequilongi palea inferiore oblongo-elongata, ad api-

cem obtuse bilobum attenuata, 7-nervia, nervo medio lateralibus duobus multo breviore; superiore ⅔ breviore.

β. *umbrosa*, culmis foliisque subplanis, flaccidis; panicula pauciflora; spiculis virescentibus.

Hab. in provincia Coquimbo regni Chilensis (Gay).

11. MELICA ARGENTEA Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 374.

M. caespitosa, culmis fertilibus steriles nullos gerentibus, 1—2-pedalibus, 6—18-nodis, valde tortuosis; foliis planis v. subconvolutis, utrinque scabris; culmis sterilibus ex anni praeteriti culmo, vaginis cinerascentibus tecto, nascentibus; panicula laxa, 3—5-pollicari, violaceo et argenteo-scarioso nitide variegata; ramis divaricatis, ad summum 2—3-poll. longis; ramusculis 1—5-spiculas sub 2—3-floras, 3½ lineal. gerentibus, glumis spicula paulo brevioribus; inferiore obovato-elliptica, 5-nervia, nervis vix anastomosantibus apice latissima argenteo-scariosa; superiore paulo longiore, ½ angustiore, 5—7-nervia; floris inferioris palea inferiore oblonga glumas superante, inferne 7-nervia, apice rotundata, glumae superiori aequilata. —

Hab. in Chile (Gay, cat. propr. n. 1107); Rancagua (Bertero n. 423).

12. MELICA VIOLACEA Cav. ic. V. p. 47. t. 472, f. 2.

β. *pallida*, glumis 5-linealibus, lutescentibus, basi tantum violaceo tinctis. Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 377. —

Hab. Rancagua regni Chil. (Bertero n. 424). Haec varietas ad M. papilionaceam L appropinquatur.

13. MELICA MAGNOLII Godr. et Gren.; Godr. et Gr. fl. fr. III. p. 550. — Melica ciliata Vill. (non Lin.)

899 KOELERIA Pers.

(Walp. Ann. III. 774.)

1. KOELERIA BALANSAE. Explorat. sc. de l'Alg. II. p. 119. — Bulle. de l. soc. bot. de France 1855 p. 310. —

Annua, caulibus pluribus rarius solitariis erectis v. ascendenti-erectis, simplicibus v. ramosis glabris v. pilosulis, f. planis dense pubescenti-velutinis, vaginis pubero-velutinis; ligula brevissima erosa ciliata panicula spiciformi ovata v. oblonga densissima; spiculis saepe 4 floris, glumis pilosis, floribus brevioribus, inferiore angustiore lin. lanceolata, superiore ovato-oblonga acuminata; glumella inferiore pilosa, apice bidentata v. breviter bicuspidata, dorso ad quartam partem superiorem aristata, arista molli et in floribus superioribus longiuscula, a glumellae parte superiore secedente. Majo 1852 florifera tecta. — Trisetum (Koeleria) Balansae Coss. et Dur. ap. Balansa pl. Alg. exs. n. 686.

Hab. in collibus petrosis apricis promontorii Cap. Falcon pr. Oran (Balansa). In Algeria hucusque tantum visa. — Planta annua, caet.

2. KOELERIA MICHELII Expl. sc. de l'Alg. II. p. 120.

Annua, caulibus pluribus, rarius solitariis saepe erectis, simplicibus, rar. b. ramosis pubescentibus v. glabrescentibus; f. angustis planis arefactione saepe demum involutis, c. vaginis molliter pubescentibus v. glabrescentibus; ligula brevissima v. obsoleta; panicula gracili laxiuscula, post anthesin contracto-subspiciformi; spiculis 3—4-floris, flore superiore ad pedicellum redacto; glumis valde inaequalibus, inferiore minuta angustissima lanceolato-subulata, superiore triplo longiore flores subaequante ovato-lanceolata acuta; caetera vide l. c.

3. KOELERIA CAMPESTRIS Ph. — Linn. XXIX. 44.

K. annua, culmis 1½—2-pedalibus, erectis, usque ad apicem foliosis; vaginis foliisque superius pubescentibus; panicula angusta, elongata, contracta, 5-pollicari, glauca; spiculis 4—5-floris; glumis aequalibus, 1¾ lin. longis; superiore ovato-lanceolata,

trinervia, pubescente, margine lato, scarioso; inferiore paullo breviore, lanceolata, uninervia; palea inferiore $1^1/_2$ lin. longa, elongata, trinervia, dorso pilosa et margine ciliata, paulo infra apicem aristata; arista dimidiam paleam aequante.

Prope Concepcion in pascuis occurrit — Culmus nodis circa 5 constat; ligulae satis elongatae, laciniatae; lamina folii supremi fere 6 poll. longa, $2^1/_4$ lin. lata. — Differt a Triseto (Koeleria) micrathero Desv. glumis pubescentibus, paleis medio dorso pilosis, spiculis sub-5-floris; a Triseto subaristato foliis elongatis, spiculis sub-5-floris; glumis acutis, palea dorso pilosa etc.

4. **KOELERIA SINAICA** Boiss. — Boiss. diagn. XIII. p. 93.

K. annua, culmis pumilis foliosis e basi geniculata erectis, foliis teneris striatis sparsim et deflexe hirtis, limbo e basi latiori lanceolato acuto, ligula brevi hirsuta, spica oblonga laxiuscula inferne saepe lobata ramosa, glumis flosculis paulo brevioribus lanceolatis acutis aequilongis inferiori villosa sublatiori superiori carina tantum ciliatula vel glabrescenti, flosculis glaberrimis, palea inferiori oblongo-lanceolata acuta subintegra superne ad quartam partem longitudinis dorso arista recta et aequilonga aucta, palea interiori multo breviori hyalina apice bifida.

Hab. in regione *Sinaitica* Aucher No. 3061.

Specimen meum tripollicare, spica limbum folii supremi vix superans; habitus et spicularum magnitudo K. phleoidis a qua ut et ab omnibus Koeleriis annuis arista multo inferius inserta, flosculis glabris, etc. eximie differt.

5. **KOELERIA CASTELLANA** Boiss. et Reut. — Steud. Synops. p. 293.

β. *velutina* Willk. (Prodr. fl. hisp. I. p. 75): folia dense velutina, thyrsus latior lobatus, spiculis majorib. (K. villosa, hb. Bont).

Hab. prope Aranjuez Hispaniae.

6. **KOELERIA SETACEA** Pers. Gren. u. Godr. fl. fr. III. 527. Willk. u. Lge. prodr. fl. hisp. I. p. 75. — Steud. Synops. p. 293.

α. *glabra* Godr. l. c. Thyrsus cylindricus, spiculis bifloris, glumis carina scabris ceterum floribus glabris. Culmi apice plerumque glabri (K. vallesiaca Gaud. Cfr. Boiss. Voy. 664. — Steud. Synops. 293.)

β. *ciliata* Godr. l. c. thyrsus cylindrico-oblongus v. ovalis, spiculis bifloris paleisque ad carinam ciliatis. Culmi apice puberuli (K. *setacea* DC. Steud. Synops. p. 293. *Koeleria valesiaca* β. *setacea* Koch. K. *tuberosa* Lois. K. *vallesiaca* Rchb. ic f. 1671. *Festuca splendens* Pourr. *Poa pectinacea* Lmk.

γ. *pubescens* Parl. fl. it. I. p. 325. Thyrsus oblongus v. ovalis spiculis bifloris glumis paleisque pubescentibus. Culmi apice puberuli. (Aira vallesiaca Bertol.)

δ. *quinqueflora* Wk. Haec stirps non solum spiculis quinquefloris sed etiam glumis valde inaequalibus differt, caet.

7. **KOELERIA CANTABRICA** Wk. (prodr. fl. hisp. I. p. 25):

Pluriculmis, viridis, culmis 2—4'' l. apice breviter nudis subtomentosis, foliorum vaginis subaristatis glabriusculis, culmum occultantibus, limbo brevi acuto canaliculato intus valde nervoso extus puberulo, thyrso 7—9''' l. oblongo compacto nitido; spiculis bifloris, 3''' l. glumis subaequalibus floribus brevioribus dorso molliter villosis late membranaceis, palea inferiore longiuscule aristata late membranacea.

Hab. in rupestribus calcareis regionis maritimae Cantabriae passim: Pico de Sarentis pr. Bilbao; Wk. c. Bermeo. ♃? Majo.

8. **KOELERIA CRASSIPES** Lge. (in pl. exsicc. 45. a., pugill. I. p. 42.):

Caespitosa, rhizomate crasso tuberiformi e pluribus foliorum sterilium fasciculis dense congestis composito, vaginis emarcidis pubescentibus integris; foliis radicalibus brevissimis obtusis glaucis rigidis angustissimis cuneatis basi longe ciliatis, ligula brevi truncata dense ciliata; culmis 6—10'' l. gracillimis nitidis superne longe nudis, thyrso cylindrico denso vix interrupto $^3/_4$—1'' l., spiculis 2—3-floris (cum rudimento pedicelli-

formi floris tertii v. quarti), glumis floribus brevioribus valde inaequalibus late lanceolatis ad carinam breviter ciliatis, palea inferiore obtusiuscula. Occurrit forma vivipara. — Willk. et Lge. Prodr. fl. hisp. I. p. 76.

Hab. in Hispania in collibus siccis Castellae vet. (ad Benavente) et in silvis supra el Escorial: Lge., et prope S. Rafael de Guadarrama: Reut. — ♃. Jun.

9. **KOELERIA MARITIMA** Lge. (in ind. sem. hort. Hauen. 1859).

Differt a K. *cristata* culmis brevior. supra medium usque foliatis, foliis filiformibus vix ciliatis panicula breviore et densiore, basi apiceque obtusa, spiculis villosis, glumis ovato-lanceolatis dorso longe et patule ciliatis. — Willk. et Lge. Prodr. fl. hisp. I. p. 76.

Hab. in Hispania ad litora Galleciae (in rupibus circa el Burgo, la Coruna, Vigo: Lge). — ♃. Jul.

10. **KOELERIA CRASSIPES** Lange (exsicc. n. 45. a. pugill. I. p. 43):

Rhizoma crassum, tuberiforme, e pluribus foliorum sterilium fasciculis dense congestis compositum; vaginae emarcidae pubescentes, integrae (nec reticulato-fissae), invicem adpressae; folia radicalia brevissima, obtusa, sub lente punctis minimis albis densissime tecta indeque glauca, rigida, angustissima (1 mm. circiter lata), plana vel exsiccatione leviter involuta, curvata, basi subinde pilis longis sparsim ciliata, ceterum glabra, folia caulina latiora, internodio breviora; ligula brevis truncata, dense ciliata; culmi laevissimi, nitidi gracillimi, articulo superiore longissimo spatio nudo; inflorescentia cylindracea, densa, basi truncata, vix interrupta; spiculae parvae, 2—3-florae cum rudimento pedicelliformi floris tertii (v. quarti), glumae flosculis breviores, late lanceolatae, acutiusculae, nervo dorsali breviter ciliatae, valde inaequales (inferior spiculae dimidiae longitudine); palea inferior obtusiuscula, superioris late bidentatae longitudine. Occurrit monstrositas floribus viviparis. Willk. et Lge. Prodr. fl. hisp. I. p. 76.

Hab. in collibus siccis Castellae vet. (ad Benevente), et in silvis supra El Escorial Lge. et pr. S. Rafael de Guadarrama. Reut.

11. **KOELERIA PHLEOIDES** Pers. (Syn. 1. p. 97):

Multiculmis, viridis, culmis 4—12'' l. adscendentibus, foliis planis angustis vaginisque pubescentibus, thyrso ½—2'' l. denso oblongo-cylindrico, spiculis 2—5-floris, nitidulis: glumis valde inaequalibus floribus brevioribus ad carinam scabris, palea infer. tuberculata 5-nervia aristam tenuem rectam scabram gerente. — Lge. et Willk. Steud. Synop. 294. Prodr. fl. hisp. 1. p. 74. Festuca phleoides Vill. et Desf. *T. cristata L. Bromus alopecuroides* Lag. ex Boiss. *Poa thyphoides* Pourr. *Lophochloa phleoides* Rchb.

α. *genuina* Willk. l. c. spiculae 2'' l. paleae inferiores nervis tuberculisque prominentibus, aristae ½—¾''' l. e thyrso valde prominentes. — Variat magnopere longitudine thyrsorum, glumis paleisque pubescentibus glumis pubescentibus et paleis glabris, glumis paleisque glabris. (K. brachystachya DC. ex Boiss. Voy. Steud. Synops. p. 294.)

12. **KOELERIA CRISTATA** Pers. — Steud. Synops. p. 292. Hook. fil. fl. New. Zeal p. 305.

Hab. in Nova Zelandia: middl. Island, Aglionbay in campis prope Nelson, (Monro).

892. DACTYLIS Linn.

(Walp. Ann. I. 942.)

1. DACTYLIS RIGIDA Boiss. et Heldr. in pl. Cret. exs. 1847. - Boiss. diagn. XIII p. 60

D. caespitosa glabra radice fibrosa, culmorum foliorumque basi vaginis membranaceis pellucidis tunicata, foliis fere omnibus radicalibus limbo expanso anguste lineari canaliculato-plicato anguste albo marginato utrinque laevi, ligula oblonga acuta, foliis culmeis paucis vagina angusta longissima limbo brevissimo stricto, culmis rigidis brevibus, panicula in spicam anguste linearem brevem strictissimam densam basi aliquando subinterruptam valde contracta, spiculis sessilibus trifloris, glumis oblongo-linearibus flore inferiori paulo brevioribus inferiori acuta superiori paulo longiori bre-

viter mucronata, flosculis oblongo-linearibus praeter carinam superne obsolete ciliatulam glabris quinquenerviis apice obtusis subtruncatis dorso excurrente brevissime mucronulatis, palea superiori aequilonga lanceolato-lineari carinato-plicata ad carinam scabridula.

Hab. in saxosis montis Idae loco Eis ta Kopita dicto alt. circ. 6000' (Heldr.)

Culmi semipedales brevioresque, folia circ. sesquipollicem longa plicata lineaque dimidia angustiora, spicae 7—10 lin. longae sesquilineam vix latae. Species ab omnibus formis D. glomeratae diversa quibus culmi semper longiores minus firmi, spicae ovato-rotundae vel ovato-oblongae multo crassiores densiores multiflorae, flosculi carina longiuscule ciliati ex apice emarginato mucronulati.

2. **DACTYLIS GLOMERATA** L. — Willk. et Lge. prodr. fl. hisp. I. p. 88.

α. *vulgaris* Boiss. (Voy. II. 665): viridis, culmis 1—3' l., foliis planis, spicularum fasciculis in paniculam 3—6" l. sub anthesi patentissimam ovatam collocatis, ramis elongatis basi longe nudis, spiculis 3—4''' l. saepe coloratis, palea inferiore acuta vel brevissime emarginata, mucronata v. aristulata.

β. *australis* Wilk. l. c. (D. hispanica Rth. Rchb. ic. fig. 1621 et 1622. Steud. Synops. p. 297. 4. — . *cylindrica* Brot. fl. lusit. I. 99.): glaucescens, culmis ½—2' l. foliis angustioribus demum involutis v. complicatis, ramis paniculae abbreviatis ideoque spicularum fasciculis in thyrsum cylindricum angustum interruptum v. lobatum 1—5" l. collocatis, spiculis 2—3" l., palea inferiore conspicue marginato-biloba aristulata.

γ. *Juncinella* Boiss. l. c. (D. Juncinella Bory., D. glomerata, β. microstachya B.). Glaucescens, culmis 4—12" l. foliis rigidioribus complicatis v. convoluto-setaceis, spiculis 2''' l. in thyrsum 4—8" l. compactum vix lobatum capitatum v. spicaeformem congestis, palea inferiore magis pubescente emarginata aristulata.

Hab. etiam in Hispania tota.

3. **DACTYLIS (AMMOCHLOA) PALAESTINA** Boiss. — And. p. 428. — *Ammochloa subacaulis* Balansa (sub Sesleria) pl. Alger. exsicc. n. 709; Coss. et Dur. Fl. Alger. phaner. I. 92. Bulletin de la Soc. bot. de France 1857 p. 498.

Hab. in arenis deserti Tunetani, in Sahara Algeriensi etc., in Hispania orientali et Palaestina. — Cfr. supra sub Ammochloa. —

4. **DACTYLIS LIMA** L. — Steud. Synops. 297. — *Wangenheimia Lima* Trin. — Lge. et Willk. Prodr. fl. hisp. p. 87.

Wangenheimia disticha Muel. *Cynosurus Lima* Loufl. (av. Jcon. t. 91. Desf. fl. atl. t. 19. *Dineba Lima* Lag.

Hab. in Algeria et Hispania (in arenosis calcareisque regionis inferioris Hisp. centralis et australis passim.)

SCLEROPOA Griseb.

1. **SCLEROPOA PHILISTAEA** Boiss. diagn. XIII. p. 60.

Scl. glabra annua radice fibrosa, culmis pluribus basi geniculatis dein erectis laevibus rubellis, foliis laevibus anguste linearibus apice setaceo-acuminatis siccitate subconvolutis radicalibus numerosioribus, culmeis paucis limbo brevi strictiusculo, ligula oblonga acuta fimbriata, panicula ovato-oblonga ramis 3—5 spiculatis erecto-patulis spiculis brevioribus pedicellisque tandem saepe deflexis acute angulatis laevibus, spiculis pallide rubellis compressis eximie distichis oblongis 10—13 floris basi saepe attenuatis, glumis parvis lanceolatis acutis acute carinatis floro proximo paulo brevioribus, axi parce hirtula non fragili, flosculis oblongo-linearibus, palea inferiori subcoriacea trinervi basi obtuse superne acute carinata glabra vel inferne parce et brevissime hirtula apice brevissime membranacea rotundata, carina vel mutica vel in mucronulum apice non longius lente vix perspicuum sub apice abeunti, palea superiori breviori oblongo-lineari bicarinata ad carinas scabridula.

Hab. in arena lutea mobili regionis Philisteae circa Gaza in Palaestina australi. Leg. Aprili 1846.

Semi-1 pedalis, folia brevia, panicula 2—3 pollicaris, spiculae 5—6 lineas longae 2 vel paulo amplius latae. Affinis *Scleropoae maritimae* Link quae egregie differt spiculis minus regulariter distichis angustioribus, axi fragili, flosculis glaberrimis magis elongatis acute quinquenerviis nervis lateralibus approximatis. Nostra species habitu, et spiculis distichis magis refert *Catapodium Siculum* = Link *Triticum unioloides* An. spiculis sessilibus statim distinguendum et flosculis apice tantum acute carinatis transitum inter Scleropoas et Catapodia generice forsan non satis distincta praebet.

2. SCLEROPOA PUMILA Boiss. — Boiss. diagn. XIII. p. 61.

Scl. annua glabra, culmis numerosis pumilis exterioribus basi geniculatis omnibus foliosis longitudine inaequalibus scabridis, foliis inferioribus paucis lineari-setaceis, caulinorum vaginis dilatatis striatis laevibus elongatis limbo lanceolato apice subulato folii supremi paniculam saepe aequanti, ligula oblongo-lanceolata acuta lacera, panicula oblonga ramis brevibus angulatis scabridis divaricatim ramulosis ad spicularum ortum infracto-flexuosis, spiculis sessilibus super ramulum angulo recto patentibus angustissime linearibus, glumis aequalibus anguste lineari-lanceolatis obtusiusculis acute carinatis flosculo inferiori fere dimidio brevioribus, axi elongata, flosculis strictis invicem plus eorum longitudine media distantibus linearibus, palea inferiori lineari nervis tribus validis percursa subcoriacea virenti margine et apice brevissime albo-membranacea carinata obtusiuscula ad nervos superne scabrida, superiori aequilonga lineari obtusa ad 2 nervos scabridula.

Hab. in deserto Arabiae petreae Palaestinae conterminae (Boiss.), in desertis Alexandriae (Cadet de Fontenay).

Culmi saepius 3—4 rarius 5—7 pollicares, paniculae 1½—2 poll. longae ramulis spiculis brevioribus, spiculae 3—4 lineas longae angustissimae tereti-angulatae. Affinis *Scler. divaricatae* Link = *Festucae divaricatae* Desf. quae egregie differt culmis elatioribus vix basi geniculatis, vaginis foliorum culmeorum non dilatatis inflatis, spiculis multifloris 5—12 lin. longis crassioribus, paleis obsoletius nervosis inferiori non scabrida.

3. SCLEROPOA MEMPHITICA Boiss. — Boiss. diagn. XIII. p. 62. (cfr. infra genus Cutandia Willk.)

Sc. annua glabra, culmis numerosis basi valde geniculatis dein erectis laevibus, foliis fere omnibus culmeis vaginis striatis laevibus latis subinflatis limbo lanceolato subulato-attenuato vaginae aequilongo eo folii supremi paniculae saepius aequilongo ligula oblonga acuta lacera, panicula oblonga ramosissima, ramis articulato-fragilibus patentibus angulatis scabridis inferioribus elongatis omnibus divaricatim ramulosis spiculis subsessilibus ramulo angulo recto insidentibus oblongo-linearibus trifloris glumis linearibus acuminatis rigidis subinaequalibus carinatis superne carina parcissime scabridis caeterum glabris flosculo inferiori dimidio brevioribus, flosculis strictis linearibus acuminatis invicem quarte parte eorum longitudinis distantibus, palea inferiori glabra trinervi carinata obsolete ad carinam superne scabridula vel omnino laevi coriacea virenti anguste lineari superne attenuato-acuminata albido-membranacea apice in denticulum acutum minutum abeunti, carina in aristulam denticulo longiorem producta, palea superiori breviori lineari obtusa ad 2 nervos scabrida.

Hab. in arena mobili ad pedem rupium in vallibus Sinaiticis Wadi Mokatteb, Wadi Scheick etc. (Boiss.), in desertis Aegyptiaco-Arabicis Thebaidis (Husson).

Dactylis Memphitica Sprengl.

Planta ½—1 podalis inferne saepe arena mobili sepulta, foliorum superiorum limbus saepe 2—3 poll. longus, vaginae 2½—3 lineas saepe latae, panicula ea praecedentis amplior propter ramos longiores magis effusa. Habitu et vaginis latis foliorum praecedenti affinis ab ea differt ramis paniculae elongatis, spiculis breviter pedicellatis

et praesertim flosculis inter se minus remotis axi minus strictis fere laevibus attenuato-subulatis apice longius membranaceis et carina producta longiuscule aristulatis. A Scleropoa divaricata notis datis longius distat.

Ad 892. CUTANDIA Willk.

(Willk. in Bot. Zeit. 1860.)

Spiculae 3—4-florae compressae, in paniculam di-trichotome ramosam divaricatam ordinatae, articulato-fragiles. Glumae inaequales, floribus breviores, acutae mucronatae uninerviae membranaceae. Palea inferior trinervia valde carinata acuta bidentata breviter aristata, superior bifida acuta. Caryopsis fusiformis obtusa facie interiore lato-canaliculata.

Dicavi cl. *Cutanda*, prof. Madrit. de flora Castellana optime merito. — Willk. et Lge. Prodr. fl. hisp. I. p. 86.

1. CUTANDIA SCLEROPOIDES Willk. l. c. 130:

Pluriculmis, culmis geniculato-adscendentibus basi saepe radicantibus ½—1' l. saepe ramosis, foliosis, vaginis glabris subinflatis, suprema paniculam involucrante, ligula elongata, oblonga, lacera; paniculae 2—4" l. irregularis ramis crassis triquetris ternis, longioribus bis v. ter dichotomis ramulisque sub anthesi divaricatissimis, spiculis 4''' l. lanceolatis, pallide virentibus glabris, floribus remotis, palea inferiore lineari-lanceolata acuminata acutissima aristam brevem rectam sub apice brevissime bidentata gerente. — Willk. et Lge. Prodr. fl. hisp. l. c. — *Dineba divaricata* RS. *Dactylis memphitica* Spr. *Festuca memphitica* (Steud. Synops. p. 302. 10?) Boiss. et Coss. pl. crit. 183. *Scleropoa memphitica* Boiss. diagn. pl. orient. XIII. 62. *Scl. caspica* C. Koch.

Hab. in Algeria, Sahara algeriensi, Aegypto, Arabia petraea, Turcia, prov. caucasicis Hispania (in arenosis maritimis ad promont. Cabo de Gata).

899. FESTUCA L.

(Walp. Ann. III. 775.)

(Heuffel: Enumeratio plant. Banatus Temesiensis in Verh. der zool.-bot. Gesellsch. zu Wien. 1858 p. 232.)

1. FESTUCA OVINA L.

Panicula coarctata, racemosa, secunda; ramis inferioribus ramosis, spiculas 3—5 gerentibus, super. simplicibus, rachi ramulisque angulatis, scabriusculis; spiculis oblongis, teretiusculis, 4-floris; valvis inaequalibus, majore 3-nervi; paleis enervibus glabris sub lente marginibus aristaque paleam feré longa. ciliato-asperis; foliis convoluto-setaceis, margine scabris, ligula biaurita; culmo supra medium nudo, superne tetragono; radice fibrosa.

α. *vulgaris* Koch, Rchb. 1530.

β. *alpina* Koch, Rchb. 1533.

In pratis et pascuis siccis, in alpes usque. Mai—Aug.

2. FESTUCA DURIUSCULA Linn:

Panicula patente subsecunda, parum nutante, racemosa; ramis inferioribus ramosis, spiculas 5—6 gerentibus, super. simplicibus; rachi ramulisque angulatis scabris; spiculis oblongis, compressis, sub-5-floris; valvis inaequalibus, majori 3-nervi subaristata paleis enervibus, exteriore aristata, arista paleam fere longa; foliis convoluto-setaceis; rigidis, margine serrulato-scabris; ligula biaurita; culmo ultra medium foliato, angulato, superne scabriusculo; radice fibrosa. — Rchb. 1538.

β. *umbrosa*: foliis filiformibus.

γ. *pauciflora*: spiculis subtrifloris.

δ. *hirsuta* Host: foliis evidenter ciliatis, paleis hirsutis.

In pratis et pascuis collium montiumque. Mai—Jun.

3. FESTUCA GLAUCA Schrad.:

Glauca, panicula patente racemosa; ramis inferioribus ramosis, spiculas 5—6 gerentibus, super. simplicibus; rachi ramulisque angulatis, scabris; spiculis oblongis, compressis, sub-5-floris; valvis inaequalibus, majore 3-nervi; paleis enervibus, exteriore aristata; arista vix dimidium paleae longa; foliis convoluto-setaceis, rigidis, glabris; ligula biaurita; culmo ad medium foliato, superne angulato; radice fibrosa. — Rchb. 1542.

β. *umbrosa:* spiculis multifloris aristatis, arista paleam longa; foliis elongatis culmum subaequantibus.

γ. *hirsuta:* spiculis hirsutis; paleis ut in β. aristatis.

In apricis et sylvaticis montium calcareorum. Mai. Jun.

4. FESTUCA VAGINATA W. Kit.

Glauca; panicula sub anthesi patente, subsecunda, ramosissima, elongata, laxa; ramis glabriusculis infer. ramosis, spiculas 12—16 gerentibus, summis subsimplicibus racemosis; spiculis 5—6-floris, valvis inaequalibus, inferiore 5-, superiore 3-nervi, paleis obsolete nervosis, acutis; foliis linearibus, elongatis, convolutis, rigidis glaberrimis, ligula biaurita; culmo ad paniculam fere vaginato; radice stolonifera. — Steud. Synops. 307.

In arena mobili legionum Illyrico- et Teutonico-banaticarum vulgatissima. — Mai. Jun.

5. FESTUCA RUPICOLA Heuff.

Panicula racemosa, subsecunda, stricta, ramis scabris, infer. solitarns geminisve, spiculas 4—5 gerentibus, super. racemosis simplicibus; spiculis 4—5-floris; valvis inaequalibus lineari-subulatis, infer. 5-, super. 3-nervi, paleis obsolete nervosis, exter. pilosiuscula marginibus ciliata, in aristam se dimidium breviorem abeunti; foliis setaceo-filiformibus brevissimis margine serrulato-scabris, ligula truncata, breviter biauriculata; culmo stricto, superne angulato, glabro; radice caespitosa.

In rupestribus umbrosis montis Domagled ad Thermas Herculis. Mai. Jun.

6. FESTUCA HETEROPHYLLA Lam. Syn. — Steud. Synops. 308.

F. nemorum Leyss. Rchb. 1558.

In sylvis montanis.

7. FESTUCA NIGRESCENS Lam.

Paniculae subsecundae nutantis ramis solitariis geminisve, rachique scabris, inferioribus ramosis; spiculis oblongis, compressis sub-5-floris, variegatis; valvis ovatis acutis, majore 3-nervi; palea inferiore obsolete nervosa; carina scabriuscula, aristata, arista vix paleae dimidium longa; foliis subconformibus, radicalibus convolutis, culmeisque elongatis scabriusculis; ligula brevissime biaurita; radice fibrosa. — Rchb. 1559.

F. heterophylla var. Steud. Synops. 308.

In pascuis inprimis rupestribus alpium. Jul. Aug.

8. FESTUCA RUBRA L. Rchb. 1557. — Steud. Synops. 308.

9a. FESTUCA PSEUDOESKIA Boiss. voy. p. 673.

Radice caespitosa fibrosa, f. durissimis rigidis involutis pungentib. laevib. culmeor. limbo patenti, ligula oblonga truncato-lacera, culmis brevib. 1—2 pedalibus rigidis, paniculae erectae collectae elongatae ramis brevibus, spiculis subsexfloris pallide variis, flosculis arcte imbricatis, glumellis subaequalibus inferiori scariosa carinata obtusa breviter acuminata, superiore bicarinata ap. obtusa subtruncata.

F. pseudoeskia El. n. 195.

In glareosis summis regionis nivalis, Sierra Nevada, alt. 9000—10500'. Fl. Aug.

9b. FESTUCA GRANATENSIS Boiss. voy. p. 673. tab. 179.

Radice fibrosa caespitosa, foliis planis siccitate convolutis longissimis duris rigidis extus laevibus intus valde striatis scabridis, ligula elongata, in setas profunde fissa.

culmis 3—4 pedalibus laevibus, panicula longissima erecta, ramosa contracta spicaeformi subsecunda interrupta, spiculis subsexfloris, fl. nitidis scariosis arcte imbricatis, axi ad flosculos nodulosa glumis inaequalibus omnino scariosis hyalinis acutis, glumellis aequalibus inferiore 5-nervi scariosa, ap. obtusiuscula erosa, interiore bicarinata acutiuscula ad nervos scabrida.

F. Granatensis Boiss. El. n. 198. — *Poa scariosa* Lag.?

In siccis reg. alp. montium Granatensium vulgatissima, alt. 4000—7500'.

10. **FESTUCA CYLLENICA** Boiss. et Heldr. in pl. Graec. exs. 1849. — Boiss. diagn. XIII. p. 58.

F. perennis glaberrima dense caespitosa, radice fibrosa, foliis radicalibus dense congestis anguste linearibus secus paginam superiorem scabram plicatis tenuiter cylindricis laevibus rigidis erecto-subarcuatis acutis subpungentibus caespites lubricos formantibus, caulinis paucis brevibus minus rigidis convolutis, ligula ovata brevi, culmis tenuibus erectis, panicula erecta contracta brevi e spiculis paucis strictis constanti, spicularum pedicellis solitariis vel binis setaceis scabridis spicula plerumque brevioribus, spiculis subtrifloris stramineis, glumis lutescentibus oblongis obtusis inferiori breviori angustiori uninervi superiori obsolete trinervi flosculis tertia parte breviori, axi glabra in articulos facile secedenti, flosculis glaberrimis laevibus linearibus teretibus, palea inferiori marginibus convoluta subenervi apice membranaceo-marginata in aristulam brevissimam attenuata, interiori subbreviori acutiuscula ad 2 nervos carinales superne sub lente hirtella.

Hab. in saxosis regionis alpinae montis Kyllenes Peloponnesi alt. 5—6000' (Heldr.).

Folia radicalia ½—1 pedalia illis F. variae fere tenuiora, culmi sesquipedales, panicula pollicaris e spiculis 6—10 constans, flosculi vix 2½ lin. longi. Species distincta *F. dimorphae* Guss. inter omnes magis affinis, haec a nostra differt foliis planis, panicula magis multiflora, glumis late membranaceis, flosculis evidenter nervatis etc. Utraque a grege F. variae spiculis paucifloris, flosculis teretibus vel dorso subcompressis nec lateraliter compressis egregie differunt et hac noto ad genus Triodiam glumis flores superantibus flosculisque apice tridentatis caeterum diversum accedunt.

11. **FESTUCA SCLEROPHYLLA** Boiss. et Hoh. in Kotsch. pl. Pers. bor. 1846. — Boiss. diagn. XIII. p. 59.

F. perennis glabra glaucescens radice fibrosa culmos crassos valde elatos remote et stricte foliosos fasciculosque foliorum sterilium edenti, squamis fasciculorum sterilium sensim in folia abeuntibus, foliis rigidis duris erectis longissimis linearibus siccitate subconvolutis concoloribus valde striato-nervosis ad nervos et praesertim margines scabris, caulinorum superiorum limbo stricto vaginae aequilongo, ligula oblonga apice lacera, paniculae erectae ramis longe denudatis diffuso-pubentibus scabridis inferioribus binis, pedicellis scabridis spicula saepius brevioribus, spiculis albido-virentibus 6—7 floris, axi scabrida, glumis lanceolatis acutis valde inaequalibus, palea inferiori punctulato-scabra conspicue quinquenervi acutiuscula apice brevissime mucronulata, interiori acuta bifida margine scabrida, ovario apice hirtulo.

Hab. in schistosis montis Elbrus prope Derbent Kotschy n. 245.

Culmi 3—4 pedales, panicula 8—10 pollices longa ramis inferioribus parte nuda 2—3 pollices longis. Folia fasciculorum pedem vel sesquipedem longa. Spiculae magnitudinis *F. spectabilis* Jan quae nostra affinis differt foliis tenuioribus non rigidis brevioribus multo minus scabris siccitate non convolutis, panicula magis multiflora, flosculis punctulatis nec scabris etc. *F. drymeia* spiculis multo minoribus radicisque indole longius distat.

12. **FESTUCA BROMOIDES** L. — Vulpia sciuroides Gmel. — Lge. et Willk. Prodr. fl. hisp. I. p. 91.

β. *gracilis* Lge. pug. 50! Culmis 3—4'' l., capillaribus, panicula brevi e spiculis 2—5 constante, aristis longioribus.

γ. *longearistata* Wk. l. c. Spiculis 5—8-floris, aristis palea inferiore duplo v. subtriplo longioribus. — (V. Broteri Boiss. et Reut. pug. 128. Festuca Steud. Synops. p. 304. *Vulpia Myurus* vel *tenella* Boiss. voy. *F. hybrida* Brot.)

Hab. β. in Hispania, in Gallecia et pr. El Escorial (Lge.), γ. in Cast. nova, Extremadura et Baetica (Schousb., Lge.).

13. FESTUCA ALOPECURUS Schousb. Steud. Synops. p. 303. — *Vulpia Alopecurus* Lk. Lge. et Willk. Prodr. fl. hisp. I. p. 92.

α. *vulgaris* Boiss. Voy. II. 670. Spiculae 7—9-florae in racemum subsimplicem congestae. Paleae margine longe ciliatae, aristam suam aequantes.

β. *glabrata* Lge. pug. I. 50. Humilis, culmo ramosissimo. Racemus simplex. Spiculae 5—6-florae glaberrimae. Aristae paleis breviores.

γ. *silvatica* Boiss. l. c. Racemus elongatus basi ramosus strictus. Spiculae 7—9-florae. Paleae margine ciliatae arista sua subduplo breviores.

δ. *lanata* Boiss. l. c. Racemus subsimplex. Spiculae subquinqueflorae. Paleae sericeo-villosissimae aristam subaequantes.

Hab. in sabulosis Hispaniae regionis calidae, in Italia, Graecia, agro Tingitano.

13. FESTUCA (VULPIA) TENUICULA Boiss. et Reut. (diagn. 47). — Differt a *Festuca Michelii* Bertolon.:

Culmis pumilis, panicula secunda, glumis subaequalibus, palea floris inferioris submutica, florum superiorum breviter aristata. — Lge. et Willk. Prodr. fl. hisp. I. p. 93
Hab. ad radices collium Aranjuez prope lac. Ontigola (Reut.). — Majo.

14. FESTUCA DURIUSCULA L. — Steud. Synops. p. 306. Lge. et Willk. Prodr. fl. hisp. I. p. 93.

α. *genuina* Godr. (Fl. de France III. 572): culmi 1—2′ l., basi saepe geniculati; folia elongata laevia recta viridia. Panicula 2—3″ l.; spiculae 4—7-florae 4—5‴ l., saepissime variegatae. Glumae valde inaequales, palea inferior arista ea dimidio brevior. Variat spiculis glabris et pubescentibus. (*F. hirsuta* Host. Steud. Synops. p. 306. *F. cinerea* Vill.)

β. *elatior* Boiss. (Voy. II. 670): culmi 2—3′ l. stricti; folia elongato-filiformia laevia vel scabriuscula. Panicula 4—6″ l. angusta stricta. Spiculae 5—6‴ l., 6—7-florae glabrae virides ut tota planta. Glumae minus inaequales. Palea inferior in aristam brevem producta v. mucronata.

γ. *glauca* Koch Syn. 3981 Rchb. ic. f. 1542. (F. glauca Schrad. non Fr.): Culmi ¾—1¼′ l. stricti, basi saepe geniculati longe nudi. Folia brevia saepe recurvata rigidiora glauca. Panicula 1—3″ l. saepe variegata. Variat glumis plus minus inaequalibus, palea inferiore aristam eam dimidio breviorem gerente vel mucronata.

δ. *rivularis* Boiss. l. c. (*F. rivularis* Boiss. El. Steud. Synops. p. 308). Culmi 1—2′ l. basi geniculati. Folia brevia, culmea radicalibus latiora. Panicula nutans diffusa. Pedunculi inferiores longi patentes. Spiculae suboctoflorae rubro-variegatae, floribus dissitis. Glumae subinaequales. Palea inferior subquinquenervia breviter aristata. (Folia e descript. plana. An revera species distincta.)

ε. *Clementei* Boiss. l. c. Dense caespitosa. Culmi 8—9″ l. longe nudi graciles erecti. Folia brevia arcuata glauca. Panicula 1—2″ l. spicaeformis densa. Spiculae 3—5-florae. Variat foliis scabris et laevibus, floribus pallidis satis longe aristatis. (*F. pumila* Wk. Enum. 66. non Vill.) et rubro-violaceis breviter aristulatis v. mucronatis (*F. Clementei* Boiss. El. Steud. Synops. p. 306.)

ζ. *pyrenaica* Wk. (*F. dura* DC.) Humilis. Folia glauca culmos subaequantia Panicula parva densa.

Hab. in Hispania.

15. FESTUCA INDIGESTA Boiss. El. 64. — Steud. Synops. 307. — Lge. et Willk. Prodr. fl. hisp. I. p. 94.

α. *genuina* Wk. Culmi pedales. Folia erecta 3—4″ l. pungentia. Panicula 1½—2″ l. Spiculae 4—5‴ l. 5—8-florae. Arista tertiam paleae partem aequans.

β. *Aragonensis* Wk. Dense caespitosa. Culmi 4—9″ l. gracillimi. Folia breviora et tenuiora arcuata. Panicula ¾—1½″ l. racemosa, laxior. Spiculae 6—8-florae, 3—4‴ l. Arista palea subdimidio brevior.

γ. *hystrix* Wk. (*F. Hystrix* Boiss. El. 63. Steud. Syn. 307. *F. duriuscula* var. *hystrix* Boiss. voy. l. c. *F. curvifolia* Lag.) Dense caespitosa. Culmi gracillimi 3—6″ l. Folia abbreviata recurvata intricata rigidissima. Panicula racemosa ½—¾″ l.; spiculae 3‴ l. sub quadriflorae. Flores breviter aristatae.

Hab. in Hispania.

16. FESTUCA SCABERRIMA Lge. (pug. I. p. 51):

Caespitosa, culmis basi geniculatis deinde strictis enodibus 1½—2′ l., superne longe nudis apice non angulatis, foliis rectis angulato-setaceis scabris glaucis rigidis, culmeis 1—2 canaliculatis vagina longissima rubescente adpressa munitis, paniculae 3—6″ l. sub anthesi patulae ramis inferioribus geminis inferne longe nudis, spiculis satis longe pedunculatis, subquinquefloris, 4‴ l. virentibus vel rubentibus, glumis parum inaequalibus, floribus laxe imbricatis, palea inferiore mucronata apicem versus scabriuscula plus minus conspicue nervosa. — Lge. et Willk. Prodr. fl. hisp. I. p. 94. *F. duriuscula* var. *adscendens* Lge. exsicc. hisp.

Hab. in graminosis calcareisque apricis regionis mont. regni Granat. (Sierra de Jarana Wk.) et Jienens. (Cerro Fuendelapenna pr. Jaen Lge.).

17. FESTUCA ARUNDINACEA Schreb. — Steud. Synops. p. 310.

β. *glaucescens* Boiss. voy. II. p. 675. Folia brevia glaucescentia, basilaria angusta. Culmi 1—2′ l. Panicula contracta erecta. Spiculae variegatae. — Lge. et Willk. Prodr. fl. hisp. I. p. 97.

Hab. in Hispania in Castella nova et regno Granat.

18. FESTUCA GRACILIS Moench. — Steud. Synops. p. 316. — *Brachypodium sylvaticum* RS. Lge. et Willk. Prodr. fl. hisp. I. p. 111.

β. *multiflorum* Wk. l. c. Spica erecta. Spiculae 15—20-florae, 12—15‴ l. aristis florum superiorum palea longioribus erecto-patulis, non penicillatis. An species propria?

Hab. prope Barcinonem Hispaniae.

19. FESTUCA (BRACHYPODIUM) MUCRONATUM Willk. (Prodr. fl. hisp. I. p. 111):

Caespitosum, culmis 1½—3′ l. apice nudis, basi non ramosis, rigidis, foliis glaucis elongatis longissime acutatis rigidis erectis primo planis postea canaliculatis vel convoluto-subulatis, supra scabridis. Spica 3—6″ l. erecta, laxa, spiculis conspicue pedunculatis 8—14‴ l., 6—16-floris glabris, palea inferiore valde nervosa obtusa mucronata superiorem superante.

Hab. in dumosis saxosisque regionis mont. Hispaniae oriental. et austral. passim.

20. FESTUCA DISTACHYA Willd. — Steud. Synops. p. 317. — *Brachypodium distachyum* PB. Lge. et Willk. Prodr. fl. hisp. I. p. 112.

α. *genuinum* Willk. l. c. Spica 1—3-stachya, spiculis 6—12-floris. Culmi 3—7″ l. fasciculati, saepe diffusi.

β. *pumilum* Wk. l. c. Submonostachyum, spicula 5—6 flora. Culmi 1½—5″ l. solitarii v. fasciculati, erecti.

γ. *multiflorum* Wk. l. c. Spica 4—5 stachya, spiculis 12—24-floris. Culmi fascicuculati ½—1′ l. erecti.

Hab. in arenosis, cultis, ruderatis regionis inferioris et montanae Hispaniae.

21. FESTUCA (NARDURUS) LACHENALII Godr. fl. Lorr. 187. — Lge. et Willk. Prodr. fl. hisp. I. p. 115. — Steud. Syn. p. 302. — N. *Poa* Boiss. Voy. Esp. II. 667. *Festuca Lachenalii* Koch.

α. *genuinus* Godr. fl. fr. 111. 616. (*Triticum Halleri* Viv. *Trit. Poa* DC. *Tr. tenellum* Bert. et L.! *Brachypodium Poa* et *Halleri* RS. Rchb. ic. f. 1372.) Flores mutici. Variat spica basi ramosa. (Trit. Festuca DC.)

β. *aristatus* Boiss. voy. Flores aristati. (*Trit. tenuiculmum* Lois. *T. hispanicum* Vir. *Trit. festucoides* Bertol. *Brachypodium tenuiculum* RS. *Festuca tenuicula* Kth.).

γ. *maximus* Lge. (pug. 58): Robustus, culmis 1—1½' l.

Hab. in arenosis, cultis regionis inferioris, montanae et alpinae Hispaniae passim et raro.

22. FESTUCA (NARDURUS) TENUIFLORA Schrad. — Steud. Syn. p. 115. — *Nardurus tenellus* Rchb. exsicc. 105. Godr. et Gren. Fl. de France III. p. 616. Lge. et Willk. Prodr. fl. hisp. I. p. 115.

α. *genuinus* Godr. Palea inferior mucronata v. breviter aristata. Culmi sat robusti humiles. (*Triticum unilaterale* L. *Brachypod. unilaterale* RS. Reich. Ic. f. 1371.)

β. *aristatus* Parl. fl. it. I. 485. Palea infer. aristam ea longiorem vel eam aequantem gerens. Culmi graciles strictiores altiores. (*N. tenuiflorus* Boiss. Voy. *Triticum Nardus* DC. *Trit. tenellum* Viv. *Trit. psilanthum* Lk. *Festuca tenuiflora* Schrad. *Fest. hispanica* Kth. *Brachypodium tenuiflorum* RS. Rchb.)

Hab. in cultis arenosisque regionis inferioris Hispaniae passim et raro.

23. FESTUCA (NARDURUS) SALZMANNI Boiss. (Voy. t. 178 B.):

Glaberrimus, culmis 3—9'' l. inferne gracillimis geniculato-adscendentibus, foliis convoluto-setaceis, spica 1½—5'' l. arcuata, initio anguste cylindrica subulata, spiculis 1½—2⅓''' l. 4—5-floris adpressis subsecundis, glumis obtusissimis, palea inferiore obtusa mutica. — Lge. et Willk. Prodr. fl. hisp. I. p. 116. — *Triticum filiforme* Salzm.

Hab. in arenosis regionis calid. montan. et subalp. Hispaniae in regno Granatensi et Castell. nova ad 1000—6500'.

24. FESTUCA LOLIUM Balansa pl. Alger. Cosson et Durieu (Bullet. de la Soc. bot. de France 1855. p. 311).

Planta perennis, caespitosa, caudice foliorum steriles plures et caules saepius subsolitarios edente; foliis radicalibus plurimis, approximatis distichis vaginis sese invicem obtegentibus, linearibus, canaliculato-carinatis, glabris, rigidis; spica rigida, simplici, recta, caulis partem inferiorem longitudine aequante v. superante; spiculis oblongis 5—8-floris, glabris, sessilibus, alternis, rachi adpressis, glumis subaequalibus, concavis haud carinatis, apice obtusis, floribus subdimidio brevioribus v. eos subaequantibus; glumella inferiore glabra, ovata, concava haud carinata, obtusa mutica caryopsi macula hilari brevissima notata.

Hab. in pratis pr. Batua Algeriae.

25. FESTUCA DIVERSIFOLIA Boiss. et Bal. (in pl. cr. exsicc. n. 136 et 746, Bull. de la Soc. de France 1857 p. 306):

Caespitosa. Culmi laeves, cylindrici, basi sat compressi. Folia etiam inferiora limbo instructa, sterilia saepius involuta, filiformia, glabra, fertilia plana, latiora; ligula brevis truncata. Folia 2—3 inferiora stolonum sterilium medio inferiore vaginarum bulbiforme incrassata. Vaginae glabrae, laeves. Spiculae saepissime triflorae, in paniculam lanceolatam dispositae, ramis 5—7-natis scabris inaequalibus. Glumae oblongae lanceolatae, acutae, glabrae, tertia parte flosculis breviores inferior uninervia, superior trinervia. Palea inferior mutica, trinervia, dorso carinata: palea superior bicarinata, carinis scabris, integra superiorem subaequans. Lodiculae 2 acutae, integrae. Antherae oblongae. Ovarium glabrum, stylis terminalibus. Caryopsis oblongo-lanceolata, canaliculata, paleis inclusa iisque contigua, macula hilari punctiformi.

Hab. in monte Sipylo prope Magnesia, et in regione montana m. Tauri, et Ali-Dagh prope Cesaream.

26. **FESTUCA TILINGII** Regel et Til. (Florula Ajanensis in N. Mém. de la Soc. d. Nat. de Moscou T. XI. p. 125):

Rhizomate fibroso; foliis glaberrimis, rigidis, glaucis, involuto-subsetaceis; ligula nulla; paniculae subcontractae ramis semiverticillatis vel rarius geminis, scabriusculis; spiculis linearibus, 9—12-floris; valvula inferiore acuta, decidua; valvula superiore truncata, ciliata persistente. ♃.

Radix perennis, fibrosa. Culmus usque bipedalis. Panicula elongata, subcontracta, densa, usque 9 pollices longa.

F. convolutae Kunth (*Atropidi convolutae* Ledb. fl. ross. IV. p. 389) et *F. nervosae* Hook. fl. boreal. Am. tab. 232 affinis. Priori imprimis habitu similis, quae tamen differt ligula elongata spiculis 2—8-floris, valvulaque inferiore truncata. — *F. nervosa* Hook. folia non habet convoluta, paniculam autem laxiorem, et valvulam superiorem apice 2-dentatam.

Hab. in regione Ajanensi Asiae orientalis.

27. **FESTUCA NUBIGENA** Jungh. in ms. — Büse in pl. Jungh. III. p. 346.

Panicula angusta, pauciramea, cernua, rhachi pedicellisque longiuse. hirsutis; spiculis sub 7-floris, gluma infera breviore, glumella infera lanceolata in aristam brevem denticulatam attenuata, glumella supera lanceolata ap. bifida denticulata; f. radicalib. permultis aeque ac caulinis convolutis, canaliculatis, glabris; ligula conspicua.

Hab. ins. Javae in montib. Lawu et Merbabu. Caespites ibi format insularum adinstar, vallib. intermediis 1—3 pedalib. segregatos. (Jungh. in sched.)

28. **FESTUCA ACANTHOPHYLLA** Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 434.

F. robusta, rhizomate crassissimo; culmo bipedali et ultra, tereti, duro, laevi, vaginis foliorum sanguineo fuscis basi non tunicato; foliis coriaceis, plicato-cylindraceis, crassis, laevissimis, incurvis, duris, 4—8-pollicaribus, apice pungentibus; ligula subnulla; panicula laxiflora, 6 pollicari; ramis multifloris, inferne 3—4 verticillatis, erectis; spiculis 4½—6-linearibus, 6—7-floris, oblongis, saepe viviparis, pictis; glumis inaequalibus; floribus convexis; palea inferiore acuta, mutica; antheris 3, linearibus, 1½-linealibus; ovario glabro.

Hab. in Cordilleras de Cauquenes, valle de los Cipreses, et prov. de Colchagua, Chile (Gay).

29. **FESTUCA** (*Eufestuca* Gris.) **TUNICATA** Em. Desv. Gram. chil. in Gay Fl. chil. t. VI. p. 434:

F. erecta, 2—2½-pedalis et ultra, gracilis; culmo tereti-angulato, superne scabriusculo, usque ad apicem foliato; basi tunica sesquipollicari vaginarum cinerascentium et apice lacerarum arctissime circumdato; foliis herbaceis, convolutis, anguste linearibus, 5—6 pollicaribus; ligula subnulla; panicula laxiflora, rigida, angusta, 6—9-pollicari, ramis setaceis, multifloris, erectis, inferne 4—6-verticillatis; spiculis 3½—4½ linearibus, 4—5-floris, ante anthesin lanceolato-acutis; glumis obtusiusculis; floribus convexis; palea inferiore acuta, mutica; antheris 3 linearibus; ovario glabro.

Hab. ad Quillota. Chile. (Bertero n. 995.)

30. **FESTUCA** (*Vulpia*) **ERIOLEPIS** Em. Desv. Gram. chil. in Gay Flor. chil. t. VI. p. 428.

F. annua, caespitosa, culmis gracilibus, basi ramosis, 4—8-pollicaribus; foliis convoluto-setaceis, intus pubescentibus; ligula brevissima, biaurita; panicula 1—2-pollicari, contracte subspiciformi, stricte erecta, sub-anthesi patente; spiculis 4—5-floris, 2½—3½ lin. longis; glumis inaequalibus, inferiore 1-nervia, acuta, ½ floris aequante, superiore ovato-lanceolata, valide 3-nervia, acutiuscula, inferiore ⅓ vel ¼ longiore; floribus vel maturis elliptico-lanceolatis, 2—2½ lin. longis; palea inferiore concava, pilis rigidis, brevibus, aculeiformibus hirta, tandem fusca, aristata;

arista flore breviore; superiore aequilonga; stamine 1; area embryonali ⅓ caryopsis oblongae aequante.

Hab. in campis de la Serena et Arqueros, Chile (Gay).

31. FESTUCA LAXIFLORA Ph. — Linn. XXIX. 98.:

F. perennis, caespitosa, culmos fertiles sterilesque emittens; culmis 1½-pedalibus, foliis elongatis, 2—2¼ lin. latis, laevibus; supremis caulinis apice fere paniculam attingentibus, 2—2½-pollicaribus; vagina brevi, truncata, lacera; panicula 4—5-pollicari, laxa; ramulis solitariis, ultra medium nudis, inferioribus spiculas c. 4 gerentibus; spiculis 7 lin. longis, oblongis, subsexfloris; floribus distantibus; glumis inaequalibus, inferiore vix 2 lin. longa, fere subulata, superiore ultra 3 longa, trinervia, lineari: palea inferiore 4½ lin. longa, lineari-lanceolata, quinquenervia, aristato-acuminata: superiore parum breviore, in nervis brevissime ciliolata; rhachi vix pubescente, atropurpureo.

Loco S. Rafael dicto peninsulae Tres Montes legit cl. Fonk. — Differt a F. purpurascente paleis 4½, nec 3—3½ lin. longis, panicula pauciflora, ramis erectis, solitariis etc.

32. FESTUCA SCABRIUSCULA Ph. l. c.

F. caespitosa, glauca, in omnibus suis partibus asperula; foliis omnibus setaceo-convolutis, fasciculorum sterilium tertiam culmi partem aequantibus, caulinis brevissimis; culmo 1½-pedali, gracili, superius nudo; panicula contracta, subsecunda, pauciflora; ramis binis, breviusculis; spiculis 4½ lin. longis, 4—5-floris, scabris, glumis late lanceolatis, superiore fere ovata, trinervia, 2 lin. longa; palea inferiore 5-nervia, cuspidata sed non aristata, apice fulva, 3 lin. longa.

In collibus apricis provinciae Valdiviae inveni. — Folia radicalia 6 poll. longa culmeum unicum, vagina quadripollicari et lamina 6—12 lin. longa constans; ligula brevissima biaurita; panicula 3-pollicaris. Differt a F. glauca paleis haud aristatis scabritie omnium partium; a *F. compressifolia* Presl vero caule haud repente, ligula brevi, biaurita, neque ovata fimbriata, spiculis 4—5-floris neque 8-floris etc.

33. FESTUCA ROBUSTA Ph. l. c.

F. caespitosa, culmo erecto, 1½—3-pedali, foliis convolutis, extus laeviusculis intus pilis brevibus scabris; culmeis subtribus; ligula brevissima, truncata, glabra; panicula pedali stricta; verticillis inferioribus distantibus; ramis subquinis, valde inaequalibus; spiculis 6 lin. longis, oblongo-linearibus, saepe violascentibus, scabris, 6-floris; gluma inferiore carinata, uninervia, superiore tertio majore, trinervia, dorso rotundata; palea inferiore fere 3 lin. longa, 5-nervia, acuminata, mutica; inferiore superiorem aequante; rhachi scabra.

In collibus prope Santiago in rupium fissuris. — Folia radicalia stricta, fere 1½ pedem longa; stamina 3; caryopsin maturam non vidi. — Similis videtur *F. purpurascenti* Banks et Sol, sed differt: stolonibus nullis, ligula haud ciliata, brevissima, panicula pedali, stricta, haud divaricata, rhachi scabra sed non pubescente. A *F. procera* H. B. Kth., nimis breviter descripta, panicula haud secunda, ramis subquinis nec geminis, spiculis sexfloris haud novemfloris, aristis nullis satis distincta videtur.

34. FESTUCA HOOKERIANA F. Müll. Mss. (in Hook. Fl. Tasm. v. 2. p. 127. t. 165).

Elata, erecta, culmis vaginisque laevibus scaberulisve, foliis breviusculis planis coriaceis utrinque scaberulis, ligula brevi, coriacea, panicula effusa nutante, ramis elongatis, spiculis majusculis 6—8-floris, glumis carina marginibusque ciliatis, inferiore 3-nervi superiore 5-nervi, rachilla pilosa vel barbata, palea inferiore 7-nervi apice aristata vel sub apice bifida breviter aristata carina scaberula, superiore apice bidentata carinis pectinatis.

Hab. in Tasmania (Cheshunt, Archer) et in alpibus in Victoria Australiae.

Est Festucae spadiceae europeae, sed adhuc magis F. Kinigianae in Fuegia sat similis. In spec. junioribus stigmata terminalia conspiciuntur, sed in adultis caryopsis obovata, profunde sulcata, fere biloba, stigmatibus sub apice insertis, matura denique

caryopsis fere recta stigmat. terminalibus. Ambigit itaque inter Festucam et Bromum — Gramen robustum 2—4-pedale.

35. FESTUCA DISTICHOPHYLLA Hook. fil. (Fl. Tasman. 2. p. 127.):

Culmis brevibus ramosis rigidis glaberrimis laevibus foliosis, vaginis imbricatis, foliis distichis involutis setaceis strictis, ligula brevissima, panicula racemosa terminali pauciflora, spiculis sessilibus laevibus compressis 8—10-floris, floribus arcte imbricatis, glumis ovatis acuminatis floribus brevioribus, palea inferiore late ovata acuminata striato-nervosa. — *Poa distichophylla* Br. Prodr. 182. — *Uniola distichophylla* Lab. Fl. Nov. Holl. I. p. 21. t. 24. Steud. Synopsis p. 280.

Hab. in Tasmania in ripis, et in Australia extratropicali.

Gramen rigidum, laevissimum, densissime caespitosum. Culmi usque ad 1½ ped. longi, valde ramosi: folia 1—3 poll. longa, rigida: spiculae ⅓—½ poll.

36. FESTUCA LITTORALIS Labill. (Fl. Nov. Holl. I. 22. t. 27. Br. Prodr. 178. Hook. fil. Fl. Antarct. I. p. 99. Fl. Tasmaniae 2 p. 128. — *Poa littoralis* Lab. Fl. Nov. Holl. 1 pag. 22 t. 27. — *Arundo triodioides* Trin. Sp. Gram. 3. t. 351. Steud. Synops. p. 194. — *Schenodorus Billardierianus* Nees Lond. Journ. Bot. 2.p. 419. — *S. littoralis* P. B. Agrost. Hook. fil. Fl. Nov. Zeland. T. I. p. 309.

β. *minor*: panicula breviore, spiculis minoribus. — Hook. Fl. Nov. Zel. l. c.

Hab. in Nova Zelandia: northern and middle island prope mare (Banks and Soland., Stephenson, Colenso) — in Tasmania copiose, in Australia extratropicali, et in Lord Aucklands island. Var. β. Auckland (Sinclair). Port William (Lyall.)

37. FESTUCA FOLIOSA Hook. fil. (Fl. Ant. p. 99. t. 55):

Glaberrima. culmis caespitosis compressis foliosis (in exempl. Nov. Zeland.) brevibus, foliis subdistichis planis vel subinvolutis culmo brevioribus longioribusve, ligula membranacea triangulari, panicula nutante effusa multiflora, glumis 4—6-floris acuminatis flosculis approximatis brevioribus, palea inferiore 5-nervi acuminata subsericea v. glaberrima basi barbata. — Hook. fil. Fl. Nova Zeland. p. 308.

Hab. in Nova Zelandia; middle Island, Port William (Lyall.)

Gramen littorale, subpedalis; culmus brevis, folia coriacea culmo breviora; spiculae 2½—3 lin. longae.

899b. CATAPODIUM.

(Walp. Ann. II. 777.)

1. CATAPODIUM TUBERCULATUM Moris Explor. scient. de l'Algérie t. 41. n. 2.

899c. VULPIA Gmel.

1. VULPIA PATENS Boiss. diagn. XIII. p. 62:

V. annua glabra, culmis tenuibus pumilis basi geniculatis parce foliosis laevibus vaginis angustis, limbo convoluto setaceo flexuoso, ligula brevissima ovata acuta, panicula erecta simplici vel basi ramosa oblonga parva, spiculis rachidi crassiusculae rigidae acute angulatae distiche et angulo recto insidentibus patentibus subsessilibus oblongis 5—7-floris gluma inferiori minima triangulari squamaeformi, superiori lanceolata quadruplo majori flosculi infimi quartam partem aequanti utraque glabra, flosculis glabris linearibus infimis acutis superioribus in mucronem brevem attenuatis.

Hab. in deserto Arabiae petreae Palaestinae contermino ubi pauca specimina Aprili 1846 legi.

Culmi vix semipedales, panicula 1—1½ poll. longa, spiculae cum pedicello brevissimo fere 2 lineas longae, flosculorum mucro vix lineam dimidiam longus. Species spiculis axidi spicae distiche et angulo recto insidentibus brevissime aristatis prope *V. cynosuroidem* Parlatore = *Festucam delicatulam* Lag. collocanda.

899/914. BRACHYPODIUM Palis.

1. BRACHYPODIUM OBTUSIFOLIUM Boiss. voy. p. 679. t. 180.

Caespitosum, caulib. foliosis b. ramosis, foliis convoluto-setaceis patenti-recurvis obtusissimis, culmis unispiculatis, glumella exteriori in aristam ea fere duplo breviorem abeunte.

Brachypodium obtusifolium Boiss. non Link.
Triticum obtusifolium Boiss. El. n. 199.

Radix caespitosa, caet.

In aridis calcareis et in rupestribus reg. montanae superioris et alpinae. Sierra Tejeda, Nevada; alt. 4000—6500'. Fl. Jun. Jul.

NARDURUS Rchb.

1. NARDURUS SALZMANNI Boiss. voy. p. 667. t. 178b.

Annuus f. setaceo-convolutis, spica simplici filiformi subincurva, spiculis sessilibus minimis unilateralibus 4—5-floris, glumis inaequalibus obtusissimis, flosculis lanceolato-linearibus marg. scariosis obtusis muticis. (Conf. supra p. 1034. Festuca Salzmanni.)

Festuca et *Brachypodium Salzmanni* Boiss. in Sched. et litt.
Triticum filiforme Salzm. pl. exsicc. non Poir.

In arenosis reg. calidae et montanae prope Malaga ad pedem montis San Anton. Alt. 1000—3000'. Fl. Ap. Maj.

2. NARDURUS PERSICUS Bunge Boiss. et Buhse Pl. Cauc. et Persiae in N. Mem. de la Soc. d. Natur. de Moscou. T. XII. p. 225:

Annuus glaber culmo pumilo, foliis brevibus laevibus lineari-setaceis culmeorum vagina subampliata striata, ligula brevi biauriculata, spica laxiuscula, disticha, rachide flexuosa compressa ad angulos scabra, spiculis sessilibus 3—5-floris laxi, glumis lanceolatis acutis inaequalibus superiori triplo longiori. Flosculis tereti-subulatis tenuiter scabridis in aristam eis aequilongam tenuissimam sensim attenuatis.

Inter Dscheddak et Jesn prope Bunegu 6. Apr. 1849. leg. Lehmann.

Plantula 3—5-pollicaris, sesquipollicem longe. Flosculis cum arista 5 lineas longus. Ab aliis speciebus generis flosculis tenuissimis longe aristatis diversissimus.

900. BROMUS L.

(Walp. Ann. III. 778.)

1. BROMUS MAXIMUS Desf. — Steud. p. 319.

β. *glabra* Wk. (Prodr. Fl. hisp. I. p. 98): humilis, pauciflora, foliis et praecipue spiculis glabris, nitidis.

Hab. prope Gibraltar Hispaniae: Willk.

2. BROMUS ERECTUS Huds. — Steud. Synops. p. 320.

β. *glaber* Willk. (Prodr. Fl. hisp. I. 99): humilis, culmis gracilibus ½—1½' l. foliis basilaribus glabris.

Hab. in Navarra Hispaniae.

3. BROMUS MOLLIS L. — Steud. Synops. p. 323. Serrafalcus Parl. Lge. et Willk. Prodr. Fl. hisp. I. p. 100.

β. *leiostachys* Wk.

γ. *contractus* Lge. (Pugill. I. 53): Spiculae villosissimae propter ramos vel pedunculos abbreviatos in thyrsum satis compactum congestae. Planta humilis.

Hab. in Baetica et prope Barcinonem Hispaniae.

4. **BROMUS (SERRAFALCUS) CAVANILLESII** Willk. (Prodr. Fl. hisp. I. p. 101):
Planiculmis, culmis 3—12'' l. glabris, foliis supra pubescentibus, ligula brevi lacera spiculis 7—9-floris, 7—8''' l. lieneari-lanceolatis glabris vel puberulis, in thyrsum 1½'' l. oblongum congestis, glumis valde inaequalibus lanceolatis acuminatis, paleisque nervosis scarioso-marginatis, his oblongo-linearibus, margine vix angulum facientе, apice bifido, arista paleam subaequante.
Bromus humilis Cav. ic. VI. t. 589. f. 2.
Bromus scopgrius v. *humilis* Lge. Pug.
Hab. in arenosis et ruderatis agri Madritensis prope Aranjuez, regno Jiennensi Hisp.

5. **BROMUS SQUAMOSUS** L. — Steud. Synops. p. 325.
β. *australis* Willk. (Prodr. Fl. hisp. I. p. 101): Culmi 4—12'' l. Spiculae latissimae ovali-lanceolatae paucae in racemum simplicem secundum collocatae nitidae.
Hab. in Hispania: prope Aranjuez et in regno Granat.

6. **BROMUS ERECTUS** Huds. (Fl. angl. 39.) Steud. Synops. p. 320. Rchb. f. 1604.
β. *glaber*: vaginis foliisque glaberrimis. — Heuff. Verh. Zool.-bot. Gesellsch. zu Wien 1858. p. 234.
γ. *villosus*: spiculis pubescentibus; vaginis glabris, foliis radical. angustioribus ciliatis. — Heuff. l. c.
δ. *arenarius*: spiculis glabriusculis; vaginis villosis, foliis pilosis. — Heuff. l. c.
Hab. in lapidosis montium calcareorum et in arena mobili legionum Illyrico- et Teutonico-banaticarum. Jun. Jul.

7. **BROMUS ANATOLICUS** Boiss. et Heldr. in pl. Anat. exs. 1816 (Sect. Serrafalcus). — Boiss. diagn. XIII. p. 63.
B. annuus foliis inferiorib. ad vaginas et limbum, superiorib. secus limbum tantum indumento longo patulo mollissimo obsitis, panicula erecta patenti pyramidata ramis capillaribus patulis nutantibus inferioribus elongatis, spiculis oblongo-lanceolatis adpresse velutinis, floribus late ellipticis fructiferis margine subimbricatis, palea inferiori elevatim 9 nervi margine medium versus rotundata superiorem paulo superanti, aristis ad tertiam partem dorsi insertis siccatis recurvato-subpatulis florum superiorum palea longioribus inferiorum brevissimis.
Bromus squarrosus β. *Cyri* Trinius ex Griseb. Gram. Ross.
Hab. in rupestribus collium prope *Tsmboukkan Pamphyliae* (Heldreich).
Species habitu, spicularum forma et magnitudine B. squarroso affinis qui differt indumento multo breviori velutino, flosculis arctius imbricatis brevioribus oblongis, palea exteriori margine latius membranacea angulum obtusum manifestum exhibenti, arista altius inserta. Br. arvensis et B. patulus spiculis lanceolatis apice attenuatis paleisque quoque margine obtuse angulatis longius distant.

8. **BROMUS MACROCLADUS** Boiss. (Sect. Serrafalcus). — Boiss. diagn. XIII. p. 64.
Br. annuus ad limbos et vaginas breviter et patule hirto-velutinus, culmo elato, panicula erecta triangulari-pyramidata ramis filiformibus erecto-patulis longis inferioribus 5—7 verticillatis, spiculis oblongo-ellipticis, floribus ellipticis fructiferis margine imbricatis, palea inferiori asperulo-punctata sub 7 nervi rubella margine latiuscule albo membranacea medium versus convexa nec angulata, superiori conspicue breviori, arista paulo supra tertiam partem paleae inferioris inserta tenui recta vel dextrorsum subarcuata florum superiorum palea longiori inferiorum brevissima.
Hab. in collibus ad radices meridionales Tmoli inter Terrassa et Birgui in Lydia (Boiss. 1842).
Tripedalis, panicula semipollicem et amplius longa, ramis inferioribus saepe 3 pollices longis, his notis affinis B. arvensi qui differt spiculis angustioribus lanceolatis apice attenuatis, paleis paululum abbreviatis margine supra medium obtuse angulatis, arista altius inserta. Br. patulus quoque paleis angulatis, inferiori subaequilonga, pa-

niculaque subunilaterali differt. Br. Anatolicus denique praeter pubescentiae indolem aristis crassioribus recurvis, spiculis latioribus etc. longius differt.

9. BROMUS CRINITUS Boiss. et Hoh. in pl. Pers. bor. 1846. (Sect. Eubromus). — Boiss. diagn. XIII. p. 64.

Br. annuus? caespitosus radice fibrosa, culmis pluribus erectis foliosis mediocriter elatis, foliis teneris viridibus vaginisque pube brevissima deflexa sub lente parce obsitis, limbo lineari-lanceolato acuto, ligula ovato-oblonga hirsuta fimbriato-lacera, panicula oblonga contracta ramis capillaribus strictis scabridis spicula pluries longioribus, spiculis minimis ovatis modice compressis subquadrifloris glabris, glumis subaequilongis lanceolatis attenuato-acuminatis flosculum inferiorem aequantibus inferiori 1- superiori 3-nervi, flosculis ellipticis, palea exteriori viridi laevi obsoletissime 6—7 nervi paululum sub apice brevissime membranaceo subbidentata arista setacea recta ea sextuplo longiori munita, palea interiori aequilonga elliptico-lineari ad 2 nervos scabridula.

Hab. in monte Elbrus prope pagum Passgala.

Culmi 6—9 pollicares, panicula 1½—2 pollicaris densiuscula, spicula absque aristis 2½ lin. fere longa, flosculi sesquilineam aut paulo amplius, aristae 7—9 lin. longae. Species floribus minutis longe aristatis insignis, nulli aliae generis propius affinis, spiculis compressiusculis sectioni Serrafalco accedens sed numero nervorum glumarum habituque aptius prope Br. tectorum collocanda.

10. BROMUS SIPYLEUS Boiss. (Sect. Eubromus). — Boiss. diagn. XIII. p. 65.

Br. perennis, radice fibrosa, foliis lato-linearibus planis flexuosis margine scabris infimis paulo angustioribus omnibus praeter 2—3 superiora ad vaginas deflexim hispidulis ad limbi margines ciliatis, vagina brevissima subtruncata, culmo elato, paniculae flaccidae nutantis abbreviatae ramis valde elongatis nudis, pedunculis scaberrimis spicula brevioribus, spiculis lineari-lanceolatis strictis elongatis 7—9 floris, glumis aequalibus lineari-lanceolatis trinerviis carinatis acutissimis glabris carina scabridis, flosculis lanceolatis, palea exteriori lanceolata lineari sub 7 nervi apice attenuata acuta paululum sub apice arista recta tenui dimidio breviori aucta scabridula, interiori breviori elliptico-lineari ad 2 carinas remote breviter et rigidule denticulato-ciliata.

Hab. in umbrosis Sipyli supra Magnesiam in Lydia ubi legi fine Junii 1842.

Planta 4—5 pedalis, culmo crassiusculo, foliorum intermediorum limbo saepe fere pedali 4 lin. lato, paniculae rami inferiores parte nuda 2—3 pollicares cernui, spiculae sesquipollicares angustae. Species pulchra habitu et characteribus Br. asperi donata qui differt pilis foliorum validioribus longioribus magis asperis, spiculis flosculisque fere triplo minoribus adpresse hirtis, glumis inaequalibus. Br. erectus paniculae erectae ramis brevissimis longius distat.

11. BROMUS SCLEROPHYLLUS Boiss. (Sect. Eubromus). — Boiss. diagn. XIII. p. 65.

Br. glaberrimus perennis, radice repenti, caudicibus crassis vaginis vetustis nigris reticulato-fibrosis vaginatis, culmis elatis rigidis erectis parce foliosis, foliis rigidis duris plicato-convolutis subcylindricis subincurvis elevato-plurinerviis albidis subpungentibus, ligula brevissima truncata, panicula brevissima erecta ovata paucispiculata, ramis unispiculatis spicula longioribus strictis inferioribus binis, spicula 7 flora, glumis anguste lanceolatis valde acuminatis aequalibus flosculum infimum subaequantibus, axi pilosula, flosculis subdissitis, palea inferiori lanceolata trinervi adpresse et valde scabrida paulo sub apice acuminato membranaceo arista aequilonga contorto-divaricata aucta, palea superiori elliptico-lineari remote et longiuscule setulis scabrida.

Hab. in monte Tmolo supra Philadelphiam in Lydia ubi legi Jun. 1842.

Culmus sesquipedalis, folia inferiora angusta 4—5 pollices longa, panicula 2½ pollicaris in meo specimine 5—6 spiculata, flosculi 6—7 lin. longi, arista paulo supra basin contorta. Species Br. erecto et Br. tomentello affinis ab utroque radice breviter repenti, foliis duris convoluto-cylindricis distincta, a priori iterum flosculis 3 nec 5—7 nerviis longe aristatis arista divaricata, a posteriori glabritie diversa.

Obs. Br. Persicus Boiss. in Kotschy pl. Pers. bor. 1846 est Br. tomentosus Trinius.

12. BROMUS (FESTUCOIDES) CAPPODOCICUS Boiss. et Bol. (pl. or. exsicc. n. 841. Bull. de la Soc. bot. de France 1857 p. 306).

Caespitosus, perennis. Culmus cylindricus, glaber, laevis, basi geniculatus. Folia fertilia plana, marg. scabra, sterilia angusta, glabra vel pilis raris conspersa. Vaginae tubulosae. Panicula ovalis, nutans, ramis inferioribus geminis v. ternis, divaricatis, 2—5-spiculatis. Spiculae lineari-lanceolatae, 5—10-florae flosculis superioribus sterilibus; glumae inaequales, lanceolatae glabrae, paleas inferiores tertia parte breviores, inferior minor 1-nervia, superior 3-nervia; palea inferior lanceolata, 3—5-nervia, nervis scabris, sub apicem arista ejus longitudine instructa; palea superior bicarinata, integra v. bidentata, carinis scabris v. velutinis. Lodiculae 2, lanceolatae, integrae, glabrae antheris lineari-lanceolatis. Ovarium parte superiore velutinum; styli distincti sub apice ovarii inserti; stigmata sessilia plumosa. Caryopsis paleis tertia parte brevior extus convexa, intus concava, paleis inclusa iisque affixa.

Hab. in collibus Cappadociae usque ad 1500 metr. alt. copiose.

13. BROMUS GRACILLIMUS Bunge (Rob. Lehmann. in Mèm. prés. à l'Acad. de St. Petersb. 1854, p. 527):

Annuus; culmo inferne retrorsum pubescente, foliis molliter pilosis, ligula villosa elongata, paniculae aequalis laxae ramis inferioribus quinis-duodenis elongatis flexuosis erectis scaberrimis simplicibus divisisve, spiculis obovatis vel obovato-rhombeis 4—7-floris, gluma inferiore 1-superiore subtrinervia, flosculis lineari-oblongis invicem haud tegentibus, palea inferiore obovata obscure quinquenervia, arista subterminali recta paleam quadruplo superante, inferiore margine rigide ciliolata truncato-emarginata.

Hab. in deserto Karakan prope Kuk-Kebak, 19. Maj. 1842.

Species singularis ab omnibus Bromi speciebus distincta habitu gracili et spiculis flosculisque parvis, palea nempe inferiore, praeter aristam, sesquilineam tantum longa, tamen ob aristam infraapicalem, ovarium apice hispidum, stylorumque insertionem ad Bromos amandanda.

Descript. compl. l. c. vide.

14. BROMUS MANGO Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 436. tab. 82.

B. robustus, caespitosus, culmis 1—2½-pedalibus, basi fibrillis tectis; foliis infimis 8—12-pollicaribus et ultra, planis, margine denticulatis; ligula rotundata; panicula laxa 6—8-pollicari; ramis erectis, inferne 4—6 verticillatis, apice spiculas 1—6 erectas, ellipticas, 4—8-floras gerentibus; glumis ovato-acutis, inferiore minore, superiore 5—7-nervia floris ⅔ aequante; floribus elliptico-oblongis obtusiusculis; paleis subaequalibus, 2¼—3¼ lin. longis, extus adpresse pilosis, inferiore carinato-concava, apice mutica vel mucronata; superioris emarginatae carinis usque ad apicem dense pilosiusculis; ovario pyriformi-rotundato, trilobo, lobis hirtis, antico minori. — Species habitu B. secalino valde similis.

Hab. in Chiloe (Gay).

15. BROMUS STAMINEUS Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 440.

B. caespitosus, perennis, culmo erecto, 2-pedali, superne anguloso; foliis planis latis, 5—8-pollicaribus; ligula brevi, rotundata; vaginis inferioribus pilosis; panicula 8-pollicari, patula; ramis rigidis, non pendulis; spiculis erectis, valde compressis 4—6-floris, lanceolatis, 9—12 lin. longis, viridi-violaceis; glumis acuminatis, subulatis; floribus imbricatis, argute carinatis 5—6 lin. longis; palea inferiore 9-nervia, sub apice brevissime bilobulato aristata; arista 4—5-lineari; palea superiore angustissima, bicuspidata; staminibus 3; antheris linearibus, 2½—3 lin. longis; ovario triangulari, trilobo, lobis posticis truncatis, elongatis, antico tuberculiformi, minimo, longe hispido.

Hab. in Runcagua Chili (Bertero n. 117.)

16. BROMUS TRINII Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 441.

B. annuus, variabilis, caespitosus, culmis ½—3-pedalibus; ligula ovata, dentata foliis vaginisque glabris vel pubescentibus; spiculis 2—6-floris, 6—12 lin. longis, subcompressis, ovatis vel lanceolatis; glumis linearibus, inacuminatis, inferiore 1-, supe-

riore 3-nervia; floribus non imbricatis, dorso convexis; palea inferiore lineari-oblonga, utrinque attenuata, 5-nervia, demum tereliuscula, undique hirta, apice biloba, inter lobos cuspidato-setigeros aristata, arista basi tortili, geniculata, divaricata.

α. *pallidiflora*. Robusta, 2-pedalis et ultra, usque ad apicem nodosa; vaginis foliisque glabris; panicula ampla, effusa, pallida; spiculis 5—6-floris: floribus 5—6½ lin. longis, primum imbricatis, erectis; gluma superiore latiore; antheris linearibus, 1½—2-linearibus.

β. *micranthera*. Ut in antecedente, sed vaginis foliisque hirtis; panicula viridi; antheris brevissimis, ovatis.

γ. *manicata*. Pedalis, basi ramosa, nodis subbasilaribus; panicula laxa, stricta erecta; foliis glabris, angustis; spiculis 4—5-floris, lanceolato-elongatis; floribus angustis, erectis, longe bicuspidatis, hispidis, basi pilis albidis manicatis; gluma superiore angusta; antheris brevissimis, ovatis.

δ. *effusa*. Tripedalis, gracilis, simplex, usque ad apicem nodosa, ad nodos hirta; vaginis foliisque velutinis; panicula laxissima; spiculis 3—4-floris; floribus patulis 4—5 lin. longis, fusco et violaceo tinctis; arista 5—7 lin. longa; antheris ovatis.

ε. *stricta*. Pedalis, gracilis, basi ramosa, ad medium nodosa; foliis angustis vaginisque glabris; panicula stricta, angusta, 2—3-pollicari; spiculis 3—4-floris; floribus sordide olivaceis, sparse hirtis, 3—3½ lin. longis, lobis brevibus, obtusiusculis; arista 3—4 lin. longa.

α. *Trisetum hirtum* Trin. in Linnaea 1835 Steud. Synops. p. 229 n. 59. *Bromus Berteroanus?* Colla Mem. di Torino, XXXIX. p. 25 t. 58. Steud. Synops. p. 327 n. 126.

β. *Avena symphicarpha* Trin. mss. in herb. Berol. — A. villosula Kze. ms. in Poepp. Coll. Chil. III.

17. BROMUS MACRANTHOS (Mey.) Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 443.

α. *minor*. Foliis velutinis, saepius planis; spiculis 9—12 lin. longis, ovatis: floribus 6—7½ lin. longis. — *B. pictus* Hook. fil. in Flor. Antarct. I. p. 387; Steudel Synops. p. 323 n. 69.

β. *macrantha*. Foliis puberulo-velutinis; culmo 1—1½-pedali; spiculis 1½-pollicaribus, primum lanceolatis; floribus 8—11 lin. longis. — Br. macranthos Mey. It. I. p. 311. B. setifolius v. brevifolius Nees et Mey. in Act. Curios. XIX. suppl. 2. p. 168.

γ. *setifolia*. Foliis plicato-setaceis, rigidis; culmis rigide caespitosis; floribus 7—9 lin. longis. — *B. setifolius* Presl. Rel. Haenck. I. p. 261: Kunth En. I. p. 421 Steud. Synops.

Hab. var. α. in Andibus chilensibus australibus (Poeppig). Santiago (Gay). — Var. β. ad Valdivia; var. γ. Antuco (Poeppig); var. δ. ad Coquimbo (Gay), Andes de Odessa (Gay); var. ε. Valparaiso (Gaudichaud).

18. BROMUS COLLINUS Ph. — Linn. XXIX. 101.

Br. caespitosus, perennis, culmo erecto, 1½—2-pedali; foliis planis, glabris egregie ciliatis, 1½ lin. latis; ligula brevissima truncata; panicula 4½ poll. longa, satis contracta: ramis rigidis, erectis, ternis quinisve, 1—3 spiculas gerentibus, spiculis erectis, subquadrifloris, 9 lin. longis, lanceolatis, virescentibus; glumis acuminatis, subulatis, glaberrimis, majore 3 lin. longa; palea inferiore 5-nervia, sub apice brevissime bilobulata aristata, basi pubescente, margine versus apicem sicut arista spinuloso-ciliato, caeterum laevi; nervo medio exterioribusque valde conspicuis, reliquis duobus subobsoletis; arista recta, bilineari; rhachi pubescente.

Prope Santa Rosa in prov. Aconcagua legit cl. Gay. Herb. chil. n. 196. — Differt a Br. stamineo statura minore, foliis angustis, vaginis glabris, paleis quinquenerviis, nervis 3 valde prominentibus, nec novemnerviis; nervis omnibus parum conspicuis, rhachide haud glabra.

Obs. Bromus stamineus Desv. est famosus ille *Bromus catharticus* Molinae, quem ipse Guilno vocat, quem vero semper Lanco appellari audivi, jam a Feuilleo nomine *Gramen bromoides catharticum* descriptus et figuratus, remedium domesticum frequentissime inter chilenses usitatum, quod monere utile duxi, cum de ejus usu et nominibus vernaculis apud cl. Gay altum silentium sit! — Caeterum haec species variat spiculis glaberrimis et aristis fere omnino obsoletis. In provinciis centralibus frequentissima est.

19. BROMUS VALDIVIANUS Ph. l. c.

Br. perennis, caespitosus; culmis erectis, $1\frac{1}{2}$-pedalibus, superius nudis; foliis radicalibus angustis, pilosis, 6 poll. longis, 1 lin. latis; caulinis latioribus, vaginisque valde sulcatis, glabris; ligula foliorum superiorum triangulari, lacera, panicula $3\frac{1}{2}$ pollicari, stricta, spiculis 8—15 composita; spiculis lanceolatis, 8 lin. longis, 4—5-floris, scaberulis, viridibus: glumis lanceolatis, nervosis, superiore $3\frac{1}{4}$ lin. longa; floribus acute carinatis; palea inferiore 5 lin. longa, sub apice brevissime bilobulato aristata, novemnervia, nervis parum conspicuis; arista bilineari; rhachi scaberula.

In collibus apricis prov. Valdiviae frequens. — Differt a Br. stamineo foliis angustis, radicalibus pilosis, vaginis contra glaberrimis; panicula longe minore, spiculis omnino scabris; a Br. collino mihi vero paleis novemnerviis, scabris etc.

20. BROMUS FONKI Ph. l. c.

Br. perennis, culmo erecto, pedali, apice nudo, paucifloro; foliis angustis, pubescentibus; radicalibus $3\frac{1}{2}$—4 poll. longis, vix 1 lin. latis; culmeis subtribus, ultimo $1\frac{1}{2}$ poll. longo; ligulis superioribus oblongis, laceris; panicula stricta, contracta, ramis geminis vel solitariis, subunifloris; spiculis circa octo, 6—7 lin. longis, versus extremitatem dilatatis, dense velutino-sericeis, 3—4-floris; glumis ovatis, acutis, inferiore quinquenervia, superiore septemnervia, paleis fere duplo longiore?; palea inferiore 4 lin. longa, subenervia, integra, apice in aristam rectam, vix dimidiam paleam aequantem terminata; palea superiore inferiorem aequante.

In insula Lemuy, locis cultis invenit cl. Dr. Fonk.

Differt a *Br. picto* Hook. fil. spiculis modo 6—7 lin. longis, nec pollicaribus, numerosioribus, paleis omnino velutino-sericeis etc.

902. UNIOLA L.

(Knth. en. I. 428. suppl. 346.)

Io. add.

UNIOLA STRICTA Torr.

Torrey, bot. of the explor. of the Red River of Louisiana (1852) p. 301. tab. XX.

906. CHUSQUEA Knth.

(Knth. en. I. 425. suppl. 350.)

1. CHUSQUEA BREVIGLUMIS Ph. — Linn. XXIX. 108.

Ch. glaberrima; foliis floralibus lanceolato-linearibus, 3 poll. longis, 3 lin. latis, basi cuneatis, nervis principalibus 5; ligula brevi, truncata, glaberrima; spiculis 4 lin. longis, violascentibus; gluma inferiore obovata, brevissima; superiore ovata, acuminata, quartam vel ad summum tertiam partem flosculi sterilis adjacentis aequante; palea inferiore florum sterilium longe cuspidata, oblonga, trinervia, nervis parum prominentibus.

In Andibus dep. Chillan legit orn. Germain. Culmi secundum Germain orgyales, erecti, haud scandentes, apice ramosi.

Differt a *Ch. valdiviensi* Desv. glabritie et praesertim defectu pilorum ad os vaginarum, foliis angustioribus, basi cuneatis; gluma infima brevissima, vix $\frac{1}{4}$ lin. longa spiculis vero majoribus. Cum Ch. Quila, cui glumae aristatae, spiculam subaequantes sunt, nullo modo confundi potest.

2. CHUSQUEA ANDINA Ph. l. c.

Ch. erecta, humilis, vix bipedalis; ramis fasciculatis, densissime foliosis: foliis coriaceis, 18 lin. longis, 2—2½ lin. latis, 5-nerviis, nervo mediano valde prominente; ligula ovata; pedunculo communi dense pubescente, fere villoso; spiculis glaberrimis, nitidis, plerumque violaceis; glumis late ovatis, subaequalibus, quartam spiculae partem aequantibus; paleis floris hermaphroditi septemnerviis, apice acuminatis, nervis duobus lateralibus in apicem continuatis neque antea evanidis.

In Andibus depart. Chillan ad limitem nivis perpetuae occurrit.

Convenit cum *Ch. Coleu* nervo mediano foliorum valde prominulo, sed forma folii longe acuminata valde discrepat et potius ut in *Ch. Cumingii* est; paleae omnes apice angustiores magisque cuspidatae sunt, quam in Ch. Coleu; a qua praeterea statura humili primo adspectu differt.

3. CHUSQUEA VALDIVIENSIS Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 446.

Ch. elata, culmis floriferis divaricatis, 6—15-pollicaribus, compresso-sulcatis, polyphyllis; foliorum limbo herbaceo, lanceolato, acuto, 3—4 pollices longo, 4—7 lin. lato, superne viridi et glabro, subtus glaucescente, pubescente pilisque insperso, nervis primariis 7—9 intermedio prominulo, venulisque transversis pellucidis praedito; ligula brevissima, truncata; panicula patula, laxa, 4—6-pollicari; ramis subdistichis, oblique divergentibus, inferioribus 1½—2½ pollices longis; spiculis secus ramos fasciculato-congestis, patulis pendulisve, 3 lin. longis; glumis cuspidatis; inferiore 1-nervia, ⅓ spiculae, superiore 3-nerviae ½ spiculae attingente; floribus sterilibus glumas superantibus, superiore 3—5-nervia spicula ¼ minore; flore fertili pubescente.

Valde affinis est *C. scandenti* Knth. sed differt glumis cuspidatis ⅓ vel ½ spiculae longitudine, flosculo hermaphrodito pilis brevibus et adpressis hirto et nervis pellucidis inter nervos secundarios foliorum.

4. CHUSQUEA CUMINGII Esenbeck ex Rupr. Bambus. Monogr. p. 32. Steud. Synops. p. 336. n. 5. — Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 448. tab. 83. f. 1.

5. CHUSQUEA CULEOU Em. Desv. Gram. chil. t. VI. p. 450.

C. erecta, 15—20-pedalis et ultra, culmis terminalibus robustis; ramis erectis, 3—7-pollicaribus, densissime fasciculatis, polyphyllis; foliorum limbo valde coriaceo, lineari-elliptico, vix apice attenuato, mucronato, 1—3 poll. longo, 2—3 lin. lato, nervis primariis 5, lateralibus obsoletis, medio valde prominulo, venulisque transversis pellucidis praedito; ligula ovato-rotundata; panicula 1—1½-pollicari, stricta spiciformi-contracta, 1-laterali; spiculis 2½—3 lin. longis, obtusis; glumis 1-nerviis, spicula ¼—⅓ minoribus; floris hermaphroditi palea inferiori 7-nervia, tenuissime pubescente, in apice obtusiuscule mucronata.

Hab. prope Valdivia, in sylvis humidis vulgaris (Gay).

Species vicina est *Ch. Cumingii*, sed differt forma foliorum, quae magis coriacea, ad basin numquam attenuata, nervis pellucidis praedita, forma denique spicularum et statura peculiari.

Ad 906. CHLOOTHAMNUS Büse.

(Büse in pl. Jungh. III. 386.)

Paniculae parvae paucirameae fere omnium ramorum sunt termini. Spiculae pedicellatae lanceolatae, subquinqueflorae, florib. 4 inferioribus ad glumellam inferam redactis. Glumae adhuc distinguendae, parvae, acutae. Glumellae inferae superiora versus sensim fiunt majores, omnes coriaceae. Glumella supera tantum in fl. supremo, unice absoluto. Lodiculae 3 pentagonales, marginib. conduplicatis ap. longe ciliatis. Stam. 6. Stylus subnullus, stigmata 3 germini insident, lagenaeformi. Caryopsis....

1. CHLOOTHAMNUS CHILIANTHUS Büse. — Büse l. c. p. 387.

Gramen excelsum, perelegans, habitu Chusquaeis non absimile, at sui generis, hexandrum, tristigmaticum.

Hab. ins. Sumatrae, in prov. Angkolae super. silvis alt. 1—3000' (Jungh.).

Rami mihi prostant 7'pedales etc.

909. BAMBUSA Schreb.

(Walp. Ann. III. 781.)

1. BAMBUSA NIGRO-CILIATA Büse. — Büse in pl. Jungh. III. p. 389.

Spiculis anguste cylindricis, saepe curvatis; glumella infera in inferioribus ovata acuta, in superioribus peranguste; glumella supera itidem sensim elongata; ambabus rigide nigro-aut violaceo-ciliatis; stylo simplici; f. b. rotundatis, pedicello brevi, coriac. supra glabris, subt. pubescentib., nervis mediocriter conspicuis, margine asperrimis; f. novellis anguste lanceolatis, b. angustatis. Ut videtur, Bambusa Betung. Hassk. Tijdschr. v. Nat. Gesch. IX. p. 126.

Hab. ins. Javae pr. Tjiberem (Jungh.).

Foliis maxime accedit ad Schizostachyum Blumii Nees. Variat β. *f. glabrescentibus*. Hab. ins. Javae pr. Tjiberem, cum specie ipsa. (Jungh. non Zoll.)

909/1. ISCHUROCHLOA Büse.

(Büse in pl. Jungh. III. p. 389.)

Paniculae pauperes aut glomeruli. Spiculae depressae, multiflorae; fl. deniq. distichis, supremis tabescentib.; articulis rhacheos longis, demum secedentib., spiculis contrarie compressis. Lodiculae 3. Stamina 6. Stylus perbrevis. Stigmata 2 evoluta, longiuscula 1 vel altero hebetato. Ovarium globoso-pyriforme. Caryopsis ....

Genus proprium in vicinia generis Bambusae locandum, Arthrostylidium quodammodo referens inter Hexandra.

1. ISCHUROCHLOA SPINOSA Büse (Bamb. Kunth Agr. 431. 4). — Büse in pl. Jungh. III. p. 390.

Hab. ins. Javae (Jungh.). — Ins. Sumbava (Zoll. n. 3417 in herb. soc. fl. Neerl).

Rami floriferi (semper?) aphylli etc.

2. ISCHUROCHLOA FLORIBUNDA Büse. — Büse in pl. Jungh. III. p. 390.

Spiculis magnis, subsolitariis; in ramulorum ap. alternis; bract. basilarib. paucis; glumella infera elongata, supera involuta marginib. fere contiguis; f. parvis, lanceolatis, b. in petiol. brevem latum attenuatis, glabris, marg. scabriusc., subt. glaucis, nervo mediano subinconspicuo; culmo tereti. — Bambusa floribunda (Zoll. in sched.).

Hab. insulae Javae (Jungh.). E Japonia allata est teste Zoll. n. 3487 in herb. soc. fl. Neerl.

Culmus teres, fistulosus etc.

909/2. DINOCHLOA Büse.

(Büse in pl. Jungh. III. p. 388.)

Panicula ingens e ramis floriferis longis, iterum sed brevius ramulosis. Spiculae glomeratae subsessiles, subtriflorae, fl. binis inferioribus ad glumellam inferam redactis, supremo unice absoluto; glumae inter bracteas plures vix distinguendae. Glumellae inferae superne sensim majores. Glumella supera parva. Stam. 6; anth. ap. integrae. Ovarium subtriquetrum. Styl. perbrevis. Stigmata 3.

Genus proprium, pone genus Bambusae locandum, quocum convenit pluribus notis. Genitalia arundinariis nonnullis similia.

1. DINOCHLOA TJANKORREH Büse. — Büse l. c. p. 388. (*Nastus? Tjankorreh* Knth. agr. p. 490.)
Hab. ins. Javae pr. Pesawahan, haud longe a littore. (Jungh.)
Incolis dicitur „Tjankorreh".

Tribus XI. HORDEACEAE Knth. Gr.

912. LOLIUM L.

(Walp. Ann. III. 782.)

1. LOLIUM PERSICUM Boiss. et Hoh. in pl. Pers. bor. 1846. — Boiss. diagn. XIII. p. 66.
L. annuum vel bienne, radice fibrosa culmos floriferos tantum agenti, culmis tenuibus erectis, foliis viridibus teneris multinerviis limbo stricto angustissime lanceolato-lineari, ligula rufescenti ad marginulum truncatum fere obsoletum reducta, spica tenuissima remotiuscule 5—7 spiculata, spiculis strictis minimis subtrifloris, gluma elliptico-lanceolata obtusa dorso quinquenervi anguste membranacea flosculis tertia parte breviori, palea inferiori oblongo-lanceolata viridi subcoriacea dorso subcarinata acuta in aristam rectam tenuem ea fere duplo longiorem abeunti, interiori aequilonga subaequilata acutissima apice subbifida ad carinas scabrida.
Hab. in uliginosis montis Elbrus prope Derbend Kotschy n. 278.
Culmi 9—10-pollicares tenuissimi, spicae lineares 1—$1\frac{1}{2}$ pollicares, spiculae absque aristis vix 3 lineas longae, aristae fere 5 lineas longae. — Prope *L. multiflorum* et *L. tenue* auct. = *rigidum* Gaud. collocandum, ab utroque spiculis multo minoribus paucifloris, flosculis magis coriaceis longe aristatis diversissima. *L. arvense* culmo et rachide multo crassioribus, spiculis multifloris, flosculis brevibus turgidis muticis vel breviter aristatis longe quoque distat. Habitus Nardurl.

2. LOLIUM LEPTUROIDES Boiss. diagn. XIII. p. 67.
L. bienne vel annuum culmis humilibus basi foliosis cito in spicas crassas cylindricas incurvas abeuntibus, foliis late lineari-lanceolatis multinerviis, ligula brevi marginiformi, rachide crassissima dextrorsum sinistrorsumque alternatim et profunde excavata spiculasque excipienti marginibus latis rotundatis, gluma late lineari obtusa coriacea multinervi flosculos superanti rachidis excavationes exacte claudenti, spiculis excisuris rachidis inclusis a dorso valde compressis subquinquefloris, palea inferiori coriacea elliptica obtusa glabra mutica interiori aequilonga aequilataque carinis scabrida utraque achenio arcte adhaerenti.
Rottbolla loliacea Bory et Chaub. Fl. Pelop. pl. 3. f. 2.
Hab. in Peloponneso circa Modon.
Planta vix semipedalis, folia basi 2 lineas et amplius lata, spica 3—4 pollices longa diametro 2 lineas fere lata, gluma saepe 6—7 lin. longa, flosculi 2 lin. circ. longi. Species insignis habitu omnino Lepturi a quo spiculis multifloris distat et omni jure in genere *Lolio* juxta *L. tenue* auct. = *rigidum* Gaud. collocanda a quo spica crassa incurva, rachide multo crassiori profundiusque excisa, gluma spiculas superanti nec eis subbreviori differt.

3. LOLIUM GLUMOSUM Plan. (fl. gallec. 409):
Culmi tenues glabri, folia angusta, spiculae subcylindricae gluma dimidio breviores, 3—5 florae muticae. An potius formâ macra mutica speciei alicuju Lolii? Lge. et Willk. Prodr. fl. hisp. I. p. 114.
Hab. in Gallecia Hispaniae.

4. LOLIUM PERENNE L. — Monstrositates varias descripsit Eug. Fournier. Bull. de la Soc. bot. de France 1858 p. 65.

913. TRITICUM Linn.

(Walp. Ann. III. 782.)

1. TRITICUM (AGROPYRUM) CURVIFOLIUM Lge. (pug. I. p. 55):

Elatum (2—2½-pedale) rigidum, folia longissima, arcuato-reflexa, marginibus involutis anguste subcylindrica, apice subulato-pungentia, glauca, pagina superiore scabra, secus nervos pilis longioribus inter eosdem vero pube brevissima adpressa, ad marginem subinde glandulis minutissimis vestita; ligula brevis, cum duabus auriculis oppositifoliis hyalinis setaceis; spica erecta, spithamaea, rachis tenax, margine scabro; spiculae distichae, subdistantes (inferioribus internodium aequantibus, superioribus dimidium internodii proximi attingentibus), 5—7-florae, lanceolatae, valde compressae, apice arcuato-reflexae; glumae subaequales, spiculae dimidium attingentes, nervo valido carinatae, 7-nerviae (nervis medio proximis ad apicem exeuntibus), obtusissimae nec mucronatae, superne margine membranaceo lato cinctae; palea inferior apice rotundata obtusissima, 5-nervia nervo dorsali carinata, margine late membranaceo, glandulis minimis stipitatis ciliato et versus apicem quasi denticulato, palea superior dense ciliata. — Lge. et Willk. Prodr. fl. hisp. I. p. 109.

Hab. in collibus gypsaceis subsalsis ad Cienpo-Zuelos Hispaniae (Lge.).

Habitu maxime accedit ad *Triticum scirpeum* Guss. (e speciminibus siculis in herb. Schouwii), sed foliis longissime curvato-deflexis jam in statu juv. involuto-pungentibus, spiculis compressis fere ancipitibus, gluma inferiore uninervia, palea inf. late membranaceo-marginata et margine glanduloso-ciliata etc. videtur differre.

2. TRITICUM (AGROPYRUM) PANORMITANUM Parl. — Steud. Synops. p. 344. — *a. hispanicum* Boiss. (Voy. II. 680. t. 181).

Var. glumas habet 5-nervias in aristam 3—5‴ l. abeuntes et paleas inferiores aristae suae aequilonges. Lge. et Willk. Prodr. fl. hisp. I. p. 110.

Hab. in umbrosis humidis regionis mont. Hispaniae australis passim.

3. TRITICUM BAEOTICUM Boiss. diagn. XIII. p. 69.

Tr. annuum, culmis erectis gracilibus, foliis breviter puberulis, culmeorum limbo vagina multo breviori, fasciculo pilorum ligulae locum tenenti, spica terminali densa lineari angusta a latere vix compressa, rachide fragili longe et dense albo-pilosa, spiculis bifloris flore superiori sterili mutico, glumis bicarinatis scabridis flosculo subbrevioribus apice bidentatis dentibus rectis brevibus acutis triangularibus inaequalibus, flosculi fertilis palea inferiori apice in aristam rectam ea multoties breviorem abeunti ad aristae insertionem margine 2 denticulis rectis valde scabridis aucta.

Hab. in planitie Baeotica (Spruner).

Spicae absque aristis sesquipollicares 1½—2 lineas tantum latae, aristae super. bipollicares. Tritico monococco valde affine sed spica fere dimidio angustior obsolete a latere compressa nec valde compressa distichaque, spiculae dimidio minores, axis valde nec obsolete albo-hirsuta, glumae glabrae scabridae nec superne hispidulae.

Obs. I. Aegilops macrura Jaub. et Sp. Illustr. pl. Or. tab. 315 est *Aegilops Aucheri* Boiss. diagn. n. V. jam anno 1844 edita.

Obs. II. Aegilops loliacea Jaub. et Spach tab. 317 est *Aegilops mutica* Boiss. diagn. V.

4. TRITICUM SCABRUM Br. (Prodr. 178). Hook. fil. fl. Novae Zeland p. 311. A. Rich. Flor. — *T. squarrosum* Banks et Sol. Mss.; Hook. f. Lond. Journ. bot. v. 3 p. 417. — *Festuca scabra* Labill. Fl. Nov. Holl. v. 1. p. 22. t. 26. — *Festuca Browniana* Steud. Synops. p. 304. — *Vulpia scabra* Nees in Pl. Preiss.?

Hab. in Nova Zelandia: Northern et Middle Island, locis aridis saepe prope mare; (Banks et Sol.).

5. **TRITICUM MULTIFLORUM** Banks et Sol. sec. Hook. fil. (Fl. Nova Zeland. p. 311):
Erectum, culmis gracilibus vaginisque glabris, foliis planis superne scaberulis, spica elongata, spiculis laevibus appressis 6—16-floris, glumis inaequalibus lanceolatis obtusis acuminatisve nervosis flosculo $^1/_3$—$^2/_3$ brevioribus, palea inferiore inferne enervi superne nervosa obtusa apiculata v. in aristam brevem scabram rectam angustata, superiore obtusa. — *T. scabrum* A. Cunn. Herb. non Br. *T. repens* A. Rich. Flor.?
Hab. in Nova Zelandia: Northern Island, Bay of Islands, Auckland, East Coast etc. (Banks et Sol. etc.)
T. repenti, in Europa vulgari, valde affinis, et speciei ex Tibet (T. semicostato) identicum. — Culmi 1—2-pedales; folia plana 4—8 poll. longa superne scabra. Spica palmaris e spiculis 6—12 composita: spiculae $^1/_2$—$^3/_4$ poll. longae.

6. **TRITICUM RIGIDUM** Schrad. germ. 1. 392. — Steud. Syn. p. 343.
β. *banaticum* Heuff. (Verhandl. d. zool.-bot. Gesellsch. zu Wien 1858 p. 235): rachi foliisque culmi latioribus glaberrimis, vaginis ore barbatis.
Hab. in arena mobili legionum Illyrico- et Teutonico- banaticarum. Mai., Jun.

7. **TRITICUM HORDEACEUM** Coss. et Dur. (Bulletin de la Soc. botan. de France 1855 p. 312.)
Planta perennis, caespitosa; foliis rigidulis; spica oblonga, densa, disticha, rachi demum fragili, marginibus piloso-barbata, internodiis abbreviatis, spiculis 3—5-floris, floribus inferioribus 2-aristatis, superioribus 13 tabescentibus muticis; glumis oblongis, apice utrinque truncato aristatis concavis, dorso inter nervos valde prominentes planiusculis, nervis hirsuto-pilosis, pilis haud fasciculato-penicillatis; glumella inferiore basi vix ventricosa, superne carinata, aristata, arista glumellam subaequante vel breviore. — Majo.
Hab. in pascuis et herbidis regionis montanae Algeriae usque ad 2000 metra.
Est *T. villoso* affine.

8. **TRITICUM (AGROPYRUM) DIVARICATUM** Boiss. et Balansa (Pl. orient. exsicc. n. 840. Bull. de la Soc. bot. de France 1857 p. 307).
Radix subcaespitosa. Culmi cylindrici glabri. Folia etiam inferiora rite evoluta, plana, lanceolata, utrinque molliter pubescentia. Ligula truncata fere nulla. Vaginae laeves. Spiculae 4—5-florae, flosculis superioribus sterilibus. Rachis glabra, maturitate sat fragilis. Glumae longitudine flosc. inferiores subaequantes, glabrae, oblongae, acutae, in aristam attenuatae, inferior 5-nervia superiore 7-nervia subbrevior. Palea inferior oblongo-lanceolata, glabra vel dorso obsolete scabra apice arista divaricata fere duplo longiore instructa. Palea superior inferiorem subaequans, bicarinata, carinis scabris. Lodiculae lanceolatae, apicem versus pilis raris pubescentes. Ovarium villosum, sat longe stipitatum. Caryopsis oblongo-lanceolata, canaliculata, glabra, paleis inclusa iisque adfixa.
Hab. in regione subalpina Karamas-Dagh et Dede-Dagh (Cappadociae) — ad 1600 metr. alt.
T. elymoidi Hochst. sat affine, glumis vulgo aristatis, foliis molliter pubescentibus, et paleis inferioribus dorso laevibus diversum.

9. **TRITICUM (AGROPYRUM) TAURI** Boiss. et Balansa (Pl. or. exsicc. n. 826. Bull. de la Soc. botan. de France 1857 p. 307. — *Brachypodium ramosum* RS. var. Boiss. in Kotschy pl. Cilic. exsicc. n. 233 b.).
Planta omnibus partibus glabra. Rhizoma caespitosum. Culmi steriles fertilibus tertia parte breviores, nodis saltem superioribus glabris, fertiles cylindrici glabri. Folia lineari-setacea plus minus involuta, laevia et extus glabra, superne pubescenti-velutina. Ligula perbrevis, truncata. Vaginae laeves, glabrae. Spiculae 4—7-florae, spicam laxam formantes. Rachis glabrescens. Glumae oblongo-lanceolatae, obtusae, marg. scariosae, 5-nerviae, subinaequales, $^2/_3$ partem palearum aequantes. Palea inferior oblongo-lanceolata, mutica, 3—5-nervia; palea superior bicarinata, integra vel

bifida, $^3/_4$ partem paleae inf. aequans, carinis subglabris. Lodiculae 2 oblongo-lineares, acutae, subciliatae. Ovarium apice villosum, basi subito attenuatum; styli distincti, paullulum sub apice ovarii inserti; stigmata plumosa.

Hab. in regione alpina et subalpium montis Tauri 1700 metr. alt.

T. Elymogenes (T. junceum — Elymus arenarius) Arndt. Regensb. Fl. 1859 n. 14.
T. strictum Dethard. consp. plant. megap. p. 11. Koch Synops. 2. p. 952, apud Steudel omissum.

10. TRITICUM REPENS var. MAGELLANICUM Em. Desv. Gram. chil. in Gay Fl. chil. t. VI. p. 452.

T. rhizomate repente, culmis $1^1/_2$—3-pedalibus; ligula brevissima, denticulata; foliis planis vel convolutis, intus punctulato-scabris; spica 3—6-pollicari, virente; spiculis erectis, laxiusculis, non adpressis, oblongo-ellipticis, compressis, 6—8 lin. longis, 3—4-floris; glumis subaequalibus, spiculam dimidiam aequantibus vel superantibus, oblongo-ellipticis, convexis, 4—6-nerviis, muticis vel mucronatis, inaequilateralibus, apice eroso-denticulatis, extus pubescenti-scabris; palea inferiore 5-nervia, oblongo-elliptica, mutica vel subaristata, saepius emarginulata, extus dense pubescenti-scabra.

T. repens L. sp. 128. var. pungens Brongn. in Duperr. Voy. Bot. p. 56.
T. glaucum d'Urv. Fl. des Malouines p. 31.

Habitat in freto magellanico, Port Gallant (Le Guillon), puerte del Hambre (Hombron).

913/b. AGROPYRUM Palis.

(Walp. Ann. III. 782.)

1. AGROPYRUM (TRITICUM) ROUXII Gren. et Duval. — Gren. in Flor. Massiliensi advena 1859 p. 23.

Spica continua elongata (1 dec. longa), gracili b. saepe glumis sterilibus aucta, rhachi glabra; spiculis trifloris; glumis glabris subaequalibus, flosculo infimo vix brevioribus, anguste lanceolatis, acuminato-aristatis, uninerviis aut obscure trinerviis, carina aspera, b. minime contiguis, sed utrinque valde distantibus, sicut in Elymis; flosculis glabris, approximatis, duobus inferioribus congestis, subsessilibus, superiore stipitato; stipite glabro, 2 mill. longo; valvula inferiore lanceolata, subenervia aut obscure trinervia, aristata, arista dimidiam vel tertiam valvulae partem vix excedente; f. angustis convolutis striatis culmo multo brevioribus, glabris; ligula brevissima; vaginis inferioribus pubescentibus, superioribus sulcatis, glabris; culmo erecto, geniculato, glabro, superne tenuiter sulcato, radice fibrosa.

A Mr. Roux detecta pr. Massilia.

2. AGROPYRUM CRISTATUM R. et Sch. β *puberulum* Boiss. — Boiss. diagn. XIII. p. 67.

Vagina et folia pilis patulis vel deflexis velutina, spicae angustae spiculis glabris vel velutinis.

Triticum puberulum Boiss. et Hoh. in Kotsch. pl. Pers. bor. 1846.

Hab. ad radices montis Demawend prope Ask. Kotsch. n. 374.

Ex comparatione polymorphi Ag. cristati cui A. pectinatum quoque referendum comperi nostram plantam ab eo specifice non differre et praesertim habitu et spicis Agr. cristato var. β. Florae Altaicae optime congruere.

3. AGROPYRUM HORDEACEUM Boiss. diagn. XIII. p. 67.

A. annuum culmis nanis foliosis, foliis inferioribus anguste linearibus brevissime tomentello-hirtulis superiorum glabrescentium vagina inflata elongata valde nervosa limbo dilatato ad margines latius albo-nervoso spicam aequanti vel superanti, spica

densa ovato-oblonga obsolete disticha vagina summa basi involucrata, spiculis 4—5 floris, glumis angustissime lanceolato-linearibus carinatis ad margines praesertim hirsutis longe attenuato-subulatis flosculos subsuperantib. aequilongis nervo carinali absque lente vix distincto, palea inferiori trinervi a basi lanceolata parce et longe hirsuta longe setaceo-attenuata, palea superiori breviori anguste lineari-lanceolata attenuato-acuminata longe bidentata ad carinas scabrida.

Hab. in prov. Aderbidjan Persiae Aucher n. 5422.

Culmi 1—2 pollicares, spicae pollicem aut paulo amplius longae 6—8 lineas latae, glumae 9—11 lineas longae basi lineam dimidiam latae. Species pulchra ex affinitate Tr. Orientalis spiculis longis longe setaceo-acuminatis insignis facie Heteranthelium piliferum referens.

4. AGROPYRUM LASIANTHUM Boiss. diagn. XIII. p. 68.

A. annuum, culmis pumilis foliosis, foliis inferioribus sub lente hirtulis caeteris glabrescentibus, vaginis superioribus subinflatis, limbo oblongo-lineari abbreviato, spicis densis ovatis obsolete distichis e vagina summa remotiusculis, spiculis 4—5 floris, glumis lanceolato-linearibus aequilongis a basi anguste lanceolata longe et patule hirsuta setaceo-attenuatis flosculos subsuperantibus trinerviis carinatis nervo carinali vix absque lente distincto, palea inferiori e basi oblonga dense et longe albo-hirsuta subulato-attenuata, palea superiori breviori lanceolata acuta tenuiter et longe bidentata ad carinas scabrida.

Tr. orientale var. *lanuginosum* Griseb. Gram. Ross.

Hab. in Campis Caspiis (Fisch.) in Songaria (Turcz) sub nomine Tr. orientalis acceptum.

Planta 3—4 pollicaris, spica 8—9 lineas longa 6—7 lata; glumae circ. 5 lin. longae. Praecedenti characteribus affinis differt foliorum limbo abbreviato, spica breviori minori, glumis flosculisque multo brevioribus densius et longius hirsutis abruptius et a medio nec a basi et longissime attenuatis. Ag. Orientale spicularum longitudine magis affine differt spica eximie et regularius disticha, glumis breviter et parcius hirsutis flosculis subbrevioribus et nervo dorsali crasso oculo nudo statim perspicuo donatis, flosculis breviter hirsutis in mucronem eis breviorem nec longiorem attenuatis.

5. AGROPYRUM KOTSCHYANUM Boiss. et Hoh. in Kotsch. pl. Pers. bor. 1846. — Boiss. diagn. XIII. p. 69.

A. annuum glabrum glaucescens, culmis inferne geniculatis, vaginis foliorum superiorum subdilatatis limbo abbreviato-oblongo lanceolato, spica e vagina superiori longiuscule remota densiuscula ovata imbricata, spiculis 1—3 floris linearibus, glumis coriaceis anguste linearibus acutis ad nervum carinalem crassum scabridis flosculos non aequantibus aequilongis, palea superiori anguste lineari-lanceolata acuta dorso parce scabridula basi tereti superne carinata, superiori breviori lanceolata acuta bidentata ad carinas scabrida.

Hab. in Persia (Aucher n. 2970), ad Teheran (Kotsch. n. 12).

Culmi 6—8 pollicares, spicae pollicares 8—9 lineas latae, spiculae fere 5 lineas longae. Valde affine *A. squarroso* Link pro cujus varietate primum habui. A squarrosum tamen nunc me judice specifice differre videtur spicis spiculisque paulo minoribus, nervo glumarum carinali crassiori magis prominulo, flosculis duobus superioribus arista setacea plus minus elongata terminatis.

6. AGROPYRUM PANORMITANUM Parl. var. *Hispanica* Boiss. voy. p. 680. tab. 181.

Glumae 5-nerviae in aristam 3—5 lineas longam abeuntes, glumella interior aristam suam subaequans, interior productione nervorum marginalium biaristulata aristis spicem superantibus.

In umbrosis humidis regionis montanae superioris, Sierra Nevada infra San Geronimo secus fluvium Monachil. — Alt. 4800'. Fl. aest.

Cfr. supra Triticum Pan.

915. ELYMUS Linn.
(Walp. Ann. I. 948.)

1. ELYMUS DELILEANUS Sch. Steud. Synops. p. 348. *E. aegyptius* Spr., *E. rachitrichus* Hochst. et Steud. Syn. p. 350. *Crithopsis rachitricha* Jaub. et Sp. Ill. pl. orient. IV. t. 321 sec. I. Gay. Bull. de la Soc. bot. de France 1858 p. 317.
Hab. in Aegypto et ad port Juvenal Galliae.

2. ELYMUS CAPPADOCICUS Boiss. et Balansa (pl. orient. exicc. n. 843. — Bull. de la Soc. bot. de France 1857 p. 308.).
Omnibus partibus glaber, perennis. Culmi cylindrici, 50 centimetr. alti. Folia linearia, plus minus involuta, sensim attenuata, 1—3 inf. squamaeformia. Spica linearis, spicula solitaria terminata. Spiculae ceterae genuinae, sessiles 1—2-florae rudimento flosculi secundi v. tertii. Glumae lineari-setaceae, scabrae, flosculos aequantes v. superantes, mediae approximatae, laterales 2, subremotae. Palea inferior in apicem brevem attenuata 3—5-nervia, nervis basi obsoletioribus; palea superior bicarinata, carinis superne ciliolatis, attenuata superiore subbrevior. Lodiculae 2 membranaceae, oblongo-lanceolatae, integrae, glabrae. Antherae lanceolatae. Ovarium apice inflatum basi attenuatum, media superiore parte villosum; stigmata 2 sessilia plumosa, basi distincta, sub apice ovarii inserta.

3. ELYMUS CHONOTICUS Ph. — Linn. XXIX. 104.
E. culmo robusto, tripedali; foliis planis, 5 lin. latis; ligula brevi; spica erecta, 5—6-pollicari; articulis basalibus rhachidis 6 lin. longis, altero latere planis, altero convexis; spiculis 8 lin. longis, 5-floris; glumis spicula brevioribus, 5-nerviis, in aristam glumae aequalem sensim attenuatis; palea inferiore fere a basi quinquenervia, apice biloba; arista ejus 11 lin. longa, paleam bis aequante.
Ad S. Rafael et Portum Americanum archipelagi Chonos invenit. orn. Dr. Fr. Fonk. — Differt ab E. antarctico et agropyroidi paleis longe aristatis; ab Andino spiculis 5-floris, glumis 5-nerviis, longius aristatis, a Gayano arista longa glumarum et palearum.

4. ELYMUS GAYANUS Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 467.
E. sexpedalis, culmo valido; foliis planis, pedalibus et ultra, 3—6-lin. latis, subtus glaucis et marginibus scabris, supra breviter pilosis; ligula rotundata; spica 6-pollicari, sat crassa, viridi-violacea; racheos articulis tereti-compressis, sulcatis, apice horizontaliter truncatis; spiculis ternis, 6—7 lin. longis, 4—5-floris; floribus 3—4-fertilibus; glumis spicula brevioribus, lanceolatis, acuminato-aristatis, arista brevi, 3- sub-5-nerviis; floris inferioris palea inferiore $4^1/_2$ lin. longa, tota longitudine 5-nervia, glabra, oblonga, in apice vix conspicue scarioso 2-denticulata, nervis 3 mediis in aristam 6—7-linealem confluentibus, superiore aequilonga, apice attenuato-truncata; squamulis basi carnosis, lobulo maximo auctis.
Hab. ad Valdivia. Chile (Gay).

916. GYMNOSTICHUM Schreb.
(Endl. Gen. pl. n. 916.)

1. GYMNOSTICHUM GRACILE Hook. fil. (Fl. Novae Zeland. p. 312, tab. 70.)
Culmis gracilib. vaginisque laevib., foliis planis angustis elongatis superne asperulis, spica elongata subflexuosa gracili, spiculis 20—40 distichis sessilib., glumis setiformib. v. nullis, flosculis 2—3 hispidulis inferiore breviter secundo longe pedicellato plerumque pedicello tertio accedente, palea inferiore 5-nervi (lateralibus obscuris) in aristam rectam rigidam palea breviorem angustata.
Hab. in Nova Zelandia: northern et middle islands, in sylvis ad Patea et Tararuera; Akaroa (Raoul).
3—4-pedalis. Spica 1—7 pollices longa, rachis flexuosa plana, marg. ciliata. Spiculae cum aristis $^1/_2$—$^3/_4$ poll. longae, internodiis duplo longiores.

917. HORDEUM Linn.
(Walp. Ann. III. 786.)

1. HORDEUM ITHABURENSE Boiss. diagn. XIII. p. 70.

H. annuum glabrum culmis erectis foliosis, foliorum limbo flaccido pallide virenti margine scabro, spica e folio summo remotiuscula lineari a latere vix compressa, rachide fragillima compressissima utroque margine dense ciliata spiculis ternis, lateralibus masculis muticis, intermedio aristato unifloro cum flosculo sessili setaceo plumoso, glumis aequalibus linearibus dense et adpresse setosis in aristam setaceam flosculo paulo longiorem abeuntibus, palea flosculi fertilis dura glabra dorso bisulcata in aristam validam complanato-trigonam margine scabram sensim attenuatam rectam longissimam abeunti, palea superiori aequilonga apice retusa.

Hab. in declivibus siccis montis Ithaburis in latere meridionali supra Daburieh.

Sesquipedalis, spica absque aristis $1\frac{1}{2}-2$ pollicaris, glumae 7—8 lineas longae arista semipedalis basi lineae $\frac{3}{4}$ lata. Species pulcherrima ob aristas ingentes nulli propius affinis, prope H. vulgare et distichum collocanda.

2. HORDEUM VIOLACEUM Boiss. et Hoh. in Kotsch. pl. Pers. bor. 1846. — Boiss. diagn. XIII. p. 70.

H. perenne caespitosum, radice fibrosa, culmis erectis basi non incrassatis, foliis radicalibus numerosis caulinisque sparsis scabridis rigidiusculis limbo abbreviato, spicis violaceo-nigricantibus linearibus vix compressis axi fragillima hirtula, spiculis ternis unifloris cum rudimento subulato flosculi superioris, glumis subulatis scabris flosculos aequantibus, flosculis lateralibus masculis muticis saepius minoribus subpedicellatis, palea inferiori floris hermaphroditi lanceolato-lineari in aristam brevem ea breviorem abeunti, superiori aequilonga acuta.

H. pratense var. nodosum Griseb. Gram. Ross.

Hab. in pinguibus ad radices montis Demawend prope Lar. Kotsch. n. 325 et in monte Totschal prope Teheran alt 8000' n. 3, in faucibus montis Elbours, n. 613, in monte Kuh Daena Persiae australis Kotsch. n. 684 sub H. bulbosi var.

Culmi $2-2\frac{1}{2}$ pedales, spicae 1—2 pollicares, spiculae circ. $2\frac{1}{2}$ lin., aristae longiores 3 lineas tantum longae. Affine H. bulboso cujus olim varietatem esse credideram sed a quo differt culmis non solitariis nec basi bulbosis, glumis flosculos non superantibus, palea floris intermedii in aristam ea breviorem nec longiorem abeunti.

3. HORDEUM PRATENSE Huds. — Steud. Synops. p. 352. H. secalinum Schreb.; Lge. et Willk. Prodr. fl. hisp. I. p. 103.

β. *annuum* Lge. (pug. I. 51). Differt a specie radice annua et statura humiliore.
Hab. in pratis ad pagum Guadarrama Hispaniae (Lge.).

4. HORDEUM TRIFURCATUM Jacq. Baillon Bullet. de la Soc. bot. de France I. (1854) p. 187.

5. HORDEUM ENCLAUSTON Steud. Synops. p. 353, ex J. Gay forsan = *H. pusillum* Nutt. et H. Riehlii Steud. Synops. p. 353 ex Mississippi.

6. HORDEUM BERTEROANUM Em. Desv. Gram. chil. in Gay fl. chil. t. VI. p. 460.

H. annuum, caespitosum, radicibus tenellis; culmis basi non tunicatis, 6—9-pollicaribus, 3—4-nodis, omnibus fertilibus, foliorum vagina superiore inflata; ligula truncata, vix nulla; lamina angusta, utrinque pubescente, apice subcartilaginea; spica cylindracea, obovata, $1-1\frac{1}{2}$ pollicari; racheos articulis apice quam basi duplo latioribus; spiculis ternis, omnium glumis subaequantibus, e basi omnino setaceis, 6—10 lin. longis, rectis, non ciliatis; floribus lateralibus 1-paleaceis, setaceis; hermaphroditi paleis subaequalibus, $3\frac{1}{2}$—4 lin. longis; inferiore lanceolata, apice biloba, inter lobos breviter setaceo aristata, arista glumas subsuperante; superiore elongato-attenuata, in apice angusto bimucronata.

β. *pumila*. Culmis 1—3-pollicaribus; vaginis 2 ventricosis; spiculis tantum 5 lin. longis.

Hab. in campis circa Santiago (Gay); la Serena prov. Coquimbo (Gay); San Joaquin (Bertero n. 331); Rancagua (Bertero). — Var. β. Coquimbo (Gay).

A *Hordeo maritimo* differt glumis omnino setaceis et spicula non exacte cylindrica.

7. HORDEUM COMOSUM Presl. Rel. Haenck. I. 327 Kth. Agr. p. 457. Steud. Synops. p. 353. n. 27. — *H. andinum* Trin. Gram. Poepp. in Linnaea (1835) p. 304. Steud. Synops. 353 n. 26 et *H. cylindricum* Steud. l c. n. 25 (?). — *H. jubatum* Hook. fil. Flor. Antarct. I. p. 388 non L. sp. p. 126 nec Kth. En. plant. 1 p. 457. — *H. divergens* Nees et Meyen Hb. berol.

α. *flavescens*. Culmo pedali; vagina summa ventricosa; glumis 12—13 lin. longis.

β. *rigida*. Culmo rigido, 6—15-pollicari, superne nudo; vaginis arctis; foliis glabrescentibus; glumis minoribus.

γ. *humilis*. Culmo 3—5-pollicari; foliis vaginisque tomentosis; spiculis saepius violaceis; glumis 9 lin. longis.

Em. Desv. Gram. chil. in Gay fl. chil.

918. AEGILOPS Linn.

(Walp. Ann. III. 787.)

1. AEGILOPS UNIARISTATA Vis. — Vis. fl. Dalm. III. p. 345. (Add.)

Spica brevis cylindrica, spiculis binis fertilibus, glumis bidentatis, dente altero ovato mutico, alterius arista glumellae bicuspidatae mucrones longe superante, spiculae terminalis abortivae glumis lanc-subulatis longissimis. —

Syn. *A. ovata* Alsch. fl. Jadr. p. 28, et A. caudata? ex herb.! nec alior. et excl. diagn.

Hab. in herbid. c. Zara. fl. Majo. ⊙

2. AEGILOPS VULGARI-TRIUNCIALIS Lge. (pug. I. p. 56):

Pedalis et ultra, erecta, foliis planis glabris, vaginis ciliatis, spica cylindrica compacta absque aristis 2—3'' l. e spiculis 7—8 oblongis non ventricosis rachi arcte adpressis composita, glumis ad nervos scabris, spicularum inferiorum bidentatis, dente rachi proximo elongato in spiculis mediis in aristam spiculis longiorem productis, in spiculis summis (sterilibus) bidentatis e sinu longissime aristatis, aristis omnibus rectis scaberrimis. —

Lge. et Willk. prodr. fl. hisp. I. p. 108.

Ae. cylindrica var.? longe aristata Lge. pl. exsicc.

Hab. in agris pr. Madritum Hispaniae cum Ae. ovata et triunciali: Lge.

Habitu magis Tritico quam reliquis congeneribus similis, aliquantum tamen ad *Ae. cylindricum* accedit, qualem ex agro Vindobonensi possideo, magis vero plantae sub nomine Ae. squarrosae var. comosae Coss. et Balansa (n. 695 ad Miserghin lectae) distributae similis est, sed haec differt a nostra glumis magis ventricosis, apice reflexo etc. Cum *Ae. triunciali* convenit spica elongata aristisque apicem versus longioribus, quare hujus et Tritici vulgaris hybrida proles forsan censenda est.

3. AEGILOPS OVATA L. — Steud. Synops. p. 354.

β *late-aristata* Lge. (Pug. I, p 56.) Glumis 2—3-aristatis, aristis planis latis 5-nerviis. Planta robusta. Lge. et Willk. Prodr. fl. hisp. I. p. 107.

Hab. prope Jaen Hispaniae (Lge.)

Tribus XII ROTTBOELLIACEAE Knth. gr.

922. LEPTURUS R. Br.

(Knth. en. I. 462 suppl. 373.)

1. LEPTURUS PERSICUS Boiss. diagn. XIII. p. 71. Sect. (Pholiurus).

L. annuus culmo paulo supra basin ramoso erecto inferne folioso cito in spicas lineares cylindricas longas rectas abeunti, vaginis foliisque brevibus retrorsum scabridulis, rachide spicae fragillima dorso convexa albo-marginata articulis spiculis aequilongis, glumis duabus coriaceis extus convexis sub lenteque adpresse hirtulis plurinerviis apice obtusis vix et brevissime membranaceis aequilongis flosculos paulo superantibus rachidi arcte adpressis altera paulo angustiori, flosculis binis rarius solitariis, paleis aequilongis albo-membranaceis lanceolato-linearibus obtusiusculis glaberrimis.

Hab. in Persia australi Aucher n. 2914.

Planta habitu spicisque rectis cylindricis 3—4 pollices longis L. cylindricum referens sed statim ab eo glumis bivalvibus distinguenda. Spiculis bifloris in subgenere Pholiuro prope L. pannonicum collocandus qui a nostra specie glabritie, rachide spicae multo tenuiori, spiculis a rachide sejunctis nec ejus excavationibus arcte incumbentibus minoribus, paleis apice bidentatis nec integris facile dignoscitur.

925. HEMARTHRIA R. Br.

(Knth. en. I. 465. suppl. 375.)

1. HEMARTHRIA VAGINATA Büse. — Büse in pl. Jungh. III. p. 354.

Spicis plurimis infra folia vaginatis, glumis longe acuminatis omnibus subliberis culmo c. vaginis amplis compresso, prostrato?

Habit. insulam Javae pr. Tjibogo. (Jungh.) Affinis H. uncinatae R. Br. etc. —

927. ROTTBOELLIA R. Br.

1. ROTTBOELLIA MURICATA Retz. (Kunth. agr. p. 467.) — Büse in pl. Jungh. III. p. 355.

(Var.?) β; stirps Javanica, obscure virens, spicis fere glabris, gluma spiculae sessilis ovato-lanceolata, pedicello superne attenuato, dentibus plerumque 2 validis.

Hab. in Javae m. Salak. (Jungh.)

Tribus XIII. ANDROPOGONEAE Knth. gr.

937. LUCAEA Knth.

(Knth. en. I. 472 suppl. 382.)

1. LUCAEA VRIESII Büse. — Büse in pl. Jungh. III. p. 366.

Spicis 3—5, 3 v. 4-spiculosis, spiculis valde angustis, rhacheos articulis infra barbatis, pedicellis sterilib. nullis, fl. diandris. f. cordato-lanceolatis. vaginis internodiis multo brevioribus, suprema longa c. lamina exigua, culmo erecto.

Hab. ins. Javae pr. Tjibogo. (Jungh.)

Char. generis quem Kunth exhibuit quodammodo mutandus est, hinc lege ibidem: Spiculae solitariae c. pedicello sterili vel nullo stamina3 vel 2. — Culmus 3-pedalis etc. — Nomen specificum dedimus in honorem celeb.viri. herbar. Junghuhniano Acad. Lugd. Batav. praepositi. —

2. LUCAEA TYPICA Büse. — Büse in pl. Jungh. III. p. 367.

Spicis multis subdigitato-approximatis, 3—12-spiculosis, rhacheos articulis pedicellisque sterilibus tota longitudine barbatis, spiculis lanceolatis, f. anguste cordato-lanceolatis, marg. tuberculato-setosis, culmo b. decumbente.(?)

Hab. ins. Javae, in silvis mont. Merapi alt. 4800' et in m. Merbabu. (Jungh.) — Robusta, etc.

ANTHISTIRIEAE Anders.

Anderson Monogr. Andropogonearum 1856 I. p. 3.

ANTHISTIRIEAE ab omnibus ceteris Andropogoneis dignoscuntur: spiculis inferioribus 4 masculis v. neutris ceteras centrales et pedicellatas ut in involucrum annulare cingentibus. Spicae, e spiculis septem v. plurimis heterogamis compositae, vaginis s. bracteolis involutae v. saltem (Exotheca excepta) suffultae sunt, unde proprium prae se ferunt habitum quoad paniculam hae plantae, ad Hyparrheniam et Cymbanthelliam eo respectu accedentes. Quae itaque spiculae involucrantes et bracteolae ut primariae habendae sunt partes, quae ad genera et species dignoscendas valere debent. Genera a nobis hic recepta sequente modo igitur disponuntur.

1. Spicae bracteolis involutae v. arcte suffultae:
   a. Spiculae involucrantes inaequaliter sessiles:
      * Spicula hermaphr. singula, masc. pedicellatae 2 . . . *Anthistiria* L.
      ** Spiculae hermaphr. binae v. plures, masc. pedicellatae 3 v. plures . . . . *Androscepia* Brong
   b. Spiculae involucrantes longius, subaequaliter pedicellatae . . . . *Iseilema* Ands.
2. Spicae bracteolis destitutae . . . . *Exotheca* Ands.

ANTHISTIRIA L. (Ands.)

(Walp. Ann. III. 794. — Anderson monogr. Andropog. I. p. 4.)

Panicula axi continua. Spicae bracteolis involutae; e spiculis septem compositae; spiculae 4 externae subaequaliter sessiles, masculae v. neutrae, sessiles, involucrum formantes; spiculae centrales pedicellatae 3, una fertilis aristata, duae a b. fertiles pedicellatae masculae v. neutrae.

Vide l. c. descr.

a. Glumae exteriores spicularum involucrantium pilis albis v. pallidis sparsim hispidae v. omnino destitutae.

* *Heteroelytron*: Spiculae involucrantes et centr. neutrae membranaceae subabortientes; bracteolae longe foliiferae.

1. ANTHISTIRIA JUNGHUHNIANA Nees (herb. et ms.) Anders. l. c. p. 5.

Panicula discreta, racemosa, ramis spicigeris geminis v. solitariis ap. flexuosis; pedunculis brevibus glabriusculis; fasciculis maximis, e spicis 5—10 compositis; bracteis foliiferis et bracteolis herbaceis, marg. e tuberculis hispidis; spiculis involucrantibus et pedicellatis centralibus glaberrimis; spiculo hermaphr. barba rufa cincta, ap. hispida, arista maxima rufa-hirsuta; f. planis; culmis caespitosis. — Syn. Anth. setosa Thunb.' herb. — Perobachne secunda Presl. (Steud. syn. p. 403.) — Aristaria mutica Hassk. n. gen. et sp. pl. 12. — Anthistiria mutica Steud. Syn. p. 401 n. 25; Büse pl. Jungh. III. 341. — Heteroelytron scabrum Jungh. (Steud. l. c. 403.) — Androscepia gigantea Büse pl. Jungh. l. c.

Hab. in insula Java.

Var.: a. *minor:* culmo 2—3 ped., b. foliis densе stipato.

Hab. ad Tijbogo.

b. *altior* : culmo, humana altitudine (Jungh.)

α. *pilosissima*: bracteis densissime albo-hirtis, foliis etiam e tuberculis frequentius pilosis.

β. *glabrescens*: bract. pilis tantum paucis marginalibus relictis glabriusculis.
Hab. in rupib. montis Gunong Mandjesinang.

Culmus 2—20 ped. caet.

** *Euanthistiria*: Spiculae involucrantes et centrales pedicellatae utplurimum masculae, semper glumis binis, rite evolutis, coloratis instructae; bracteolae saepius subaphyllae. — Spicae in fasciculos bracteis arcte involutos plerumque conglomeratae. Panicula utplurimum rara, racemosa.

2. ANTHISTIRIA PUNCTATA Hochst. (Schimper it. Abyss. n. 73. et 1555). — Anders. l. c. p. 6:

Culmo erecto simplici, apice nutante, nitente, v. nodis glaberrimo; f. angustis elongatis subglaucesc. c. vagina nudis; panicula terminali, racemosa, flexuosa, nutante; fasciculis longe pedunculatis, e spicis 3—4 magnis compositis; bracteis foliiferis c. bracteolis dorso nigro-punctatis et pilosis; arista longissima; spiculis terminalibus pedicellatis glabrescentibus.

Anth. punctata Rich. Fl. Abyss. II. 488. Steud. syn. p. 400. n. 5.

Hab. in Abyssinia in montib. pr. Dochli provinciae Sana et in monte Scholoda. — Cl. Nees hanc speciem formam tantum maxime elatam et hispidam A. ciliatae habet. —

3. ANTHISTIRIA SCANDENS Roxb. (Fl. Ind. 253.) Anders. l. c. p. 7.

Culmo ramoso, volubili, glabro nitente; nodis incrassatis laevibus; f. planiusculis linearibus, c. vaginis glabris; panicula ramosa, fasciculis verticillatis, sessilibus, e spicis 3—9 compositis; bracteis marg. e tuberculis hispidis, bracteolis subglabris; spicis involucrantibus versus ap. pilosis, spicula herm. violacea, superne scabriuscula; arista admodum crassa, ferruginea, longissima; spiculis terminalibus glabriusculis acutis.

Anth. scandens Trin.; Nees Fl. Afr.; Steud. Syn. 401. n. 21.

Var. α. *hispida*: bracteis et bracteolis c. glumis spicularum invol. e tuberculis setosis.

Hab. in India or.: Himalaya, Kunawur; (Royle herb. n. 244.) In ins. Mauritii (Sieb. Fl. Maurit. II. n. 47).

Nomen Anth. barbatae vulgo tritum ad formas varias glumis hispidis pertinere videtur.

Var. β. *subimberbis*: bracteolis et glumis spicularum invol. rarius pilosis.
Hab. in Nepalia, Himalaya: Wall. Cat. n. 8764. pp.

4. ANTHISTIRIA ARGUENS Willd. (sp. pl. IV. 2 p. 901. n. 4.) Anders. l. c. p. 8:

Culmo erecto simplici, c. nodis glabro, f. linearibus elong. b. subciliatis c. vaginis glabris; panicula elongata composite racemosa; fasc. cernuis, globoso-capitatis, e spicis numerosis compositis; spiculis involucrantibus acutis, vers. ap. saepissime tuberculatis piligerisque; spic. hermaphr. acutiuscula; arista longissima, apice pallidiori; spiculis terminalib. acutissimis glabris.

Syn: *Stipa arguens* L.
Anthistiria polystachya Roxb. (Knth. en. I. p. 481.) Steud. Syn. I. p. 401—2.
Anth. arguens Willd. Knth. p. 482.; Nees.; Steud. 401. n. 18.

Variat: a) *hispida*: bracteis bracteolisque foliiferis marg. tuberculato-pilosis (Specim. Wallichiana).
b) *glabriuscula*: bract. et spiculis involucr. pilis et tuberculis fere destitutis subimberbibus. (Specim. Wightiana).

Hab. in Ind. or. Tavoy, et in prom. bonae spei in herbidis convallium alt. 1500'.

c) *japonica*: culmo graciliore, vaginis ad marg. superiores tuberculato-pilosis, panic. rariori, fasciculis glauco-ferrugineis, bract. densius tuberculato-hispidis, glumis spicularum invol. minus pilosis.

Anth. japonica Willd. sp. — Steud. Syn. 401. n. 26. (qui *Andropogon ciliatum* Thunb. huc etiam refert.)

Hab. in Japonia. Specim. a Reinwardtio lecta vidimus. Forma Japonica ab hac specie nullis notis, vix etiam habitu differt.

5. ANTHISTIRIA CILIATA Retz (Obs. III. p. 11). Anders. l. c. p. 9:

Culmo erecto ramoso nitente nodis glabris v. barbatis; fol. linearibus, attenuatis, saepe a tuberculis pilosis: panicula simpliciuscula subracemosa; fasciculis erectis v. saepius cernuis, e spicis 2—4 compositis, obovato-elongatis; bracteis bracteolisque circa margines saepe e tuberculis pilosis v. omnino glabris; spicul. invol. versus apicem plerumque hispidis; arista longa; spiculis terminalibus glabris.

Syn. *Andropogon nutans* Linn. Mant. 2. 303.

Androp. quadrivalve Linn. Syst. ed. 13. 758.

Anth. ciliata Linn. fil. (nomen sine dubio collectivum) Willd.; Nees; Roxb.; Kuth.; Steud. 401.

Anth. barbata Trin. Act. Petrop. II. 3 p. 322.

Var. a) *hispida*: bract. dorso et spiculis involucr. magis minusve hispidis.

b) *ciliata*; (imberbis); spic. involucr. dorso subglabris.

c) *mollicoma*: spiculis involucr. bracteis et vaginis densius et molliter villosis.

Hab.: In editiorib. Africae australis, tum in littore australi et occidentali campos illos format graminosos late extensos atque in summos etiam montes adscendentes. Nees.

* *Natalensis*: Culmo vix pedali; f. ad b. fasciculatis, fere curvatis; panicula rara, fasciculis e spicis 2 compositis, bracteis bracteolisque b. violaceis glabris; spicis terminalibus solito longius pedunculatis.

Hab. in Port Natal Africae austr.

** *hortensis*: fasciculis brevioribus magisque rotundatis; spicula hermaphr. apice bifurcata.

In horto Berolinensi cultam vidimus. — Est sine dubio per terras omnes calidas late dispersa species, quamquam specim. certa tantum ex Africa vidimus.

Haec species, Euanthistiriae centrum, a ceteris formis vix certe distingui potest.

Formae normalis haec descriptio: confer l. c.

6. ANTHISTIRIA ARGENTEA Nees (Gram. Afr. austr. p. 127.) Anders. l. c. p. 11: 23

Culmo ramoso, procumbente v. adscendente villoso, nodis dense barbatis, f. vaginisque argenteo-sericeis; panicula simpliciter racemosa; fasciculis spicas 2—3 includentibus obovato-truncatis; bracteolis glaberrimis; spiculis involucr. glabris v. tenuiter pilosis acutiusculis. — Steud. Syn. 401. n. 17.

Hab. in terra Caffrorum, in desertis dumosis Karro calcareisque alt. 600. (Eckl. Drège). — Accedit ad Anth. ciliatam β. inberbem, sed diff. integumento argenteo-micante e villis mollibus longe incumbentibus in adultioribus foliis denique diminuto neque vero toto evanescente. Fasciculi paulo minores quam in A. ciliata. — Nees l. c.

7. ANTHISTIRIA GLAUCA Desf. (Atl. 2. 280. tab. 257.) Anderson monogr. Andropog. I. p. 12:

Culmo ramoso stricto, b. saepe caniculato, c. nodis glabro, glaucescente, foliis longissimis angustatis, c. vaginis glaberrimis, glauco-irroratis; panicula fasciculis 2—5 in pedunculis axillaribus simplicibus anguste racemosa, terminali; fasciculis e spicis 3—5 compositis; bracteis foliiferis c. bracteolis aphyllis glabris, glaucescentibus; spiculis involucrantibus acutis glabris.

Syn. *Stipa paleacea* Willd.; Vahl.

Anth. glauca Desf.; Willd.; Knth. en. I. 482. Steud.

Anth. imberbis Desf. journ. d. ph. 40. 292. t. 1.
Cal. imberbis R. et S. II. 810.
Anth. Desfontainii Knth. Gram. I. 161. enum. I. 401.

Hab. in Algeria; Barbaria, Aegyptus, Guinea. Proxima sane videtur A. ciliatae cujus forma locis maxime arenosis, aridis desertorum enata, forsitan sit appellanda.

8. ANTHISTIRIA PUBERULA Anders. l. c. p. 12.

Culmo erecto, simplici glabro nitente, nodis pilosiusculis; f. linearibus planiusculis supra nudis et nitentibus, subt. pallidioribus puberulis; ligula brevis lacera; panicula anguste racemosa, ramis simplicibus fasciculos 4—5, e spicis 2—3 compositos, gerentibus; bract. margine pilosis, bracteolis glabriusculis; spiculis invol. late marginatis in nervis exterioribus sparsim pilosis; arista longissima supra medium geniculata, inferne castaneo-pilosa; spiculis terminalibus anguste lanceolatis glabris.

Hab. in India or. Wall.; et in Himalayae montib. Royle.

Est A. ciliatae sat similis, ita ut forsan varietas mera dicenda.

9. ANTHISTIRIA CAESPITOSA Anders. l. c. p. 13.

Culmis valde caespitosis strictis, nodis saepius pilosis, f. strictis longissime acutis scabris utrinque nudis, vaginis ore pilosiusculis; panicula stricta elongata; fasc. magnis e spicis subquinis compositis; bract. et bracteolis glabris; spiculis involucr. late lanc. acutiusculis, inter nervos transversim rugulosis, tuberculis subpilosis ad apicem interd. conspersis; arista longa.

Hab. in Nova Hollandia occid. (Drummond.)

Ad Anth. australem quacum maxime congruit se habet ut A. arguens ad A. ciliatam. Est enim omnib. partib. major et robustior etc.

10. ANTHISTIRIA AUSTRALIS R. Br. (Prodr. Fl. Nov. Holl. I. 200). Anders. Andropogon. monogr. I. p. 13.

Culmo subsimplici erecto, apice nutante, c. nodis glabro, foliis angustis cum vaginis nudis, panicula racemosa, ramis simpliciusculis laxis; fasciculis erectiusculis obovatis, e spicis 2—5 compositis; bracteis bracteolisque foliiferis glabris; spic. involucrantibus acutiusculis, glabris nervosis; arista longissima; spicis terminalibus acutissime lanceolatis glabris.

A. australis R Br.; R. et S.; Trin.; Knth. en. I. p. 402. Steud. Syn. 402. n. 2.

Hab. in Nova Hollandia: Ad Port Jackson et in Tasmania. In ins. australibus.

Haec species, quae in terra austr. A. ciliatam africanam, mediantibus A. arguente indica et A. caespitosa, omnino simulat, ut ea etiam eximie variat:

colorata: fascic. violaceis, bract. longe foliaceis; f. ad bas. culmi magis collectis et angustioribus.

a. *major:* spicis majoribus, culmo erecto.

b. *minor:* spicis minorib. culmo apice nutante.

concolor: fasciculis fulvescentibus; bracteolis subaphyllis; culmo robustiori; fol. latioribus, planiusculis; glumis spic. involucr. ad ap. tuberculis raris subinde conspersis.

pubescens: dense caespitosa, nodis culmi albo-barbatis; fol. angustissimis ad b. culm. praesertim fasciculatis, vaginis ore ciliatis; panicula rara; fasc. minoribus; spic. hermaphrod. longius pedicellata; arista parte superiore erecta, glabra.

11. ANTHISTIRIA CUSPIDATA Anders. l. c. p. 14.

Culmo erecto, inferne ramoso et foliato, c. nodis glabro; f. angustissimis v. vaginis glabris strictiusculis; panicula parva, fasc. solitariis in pedunculis erectis subfastigiatis; bracteis bracteolisque foliiferis, glabris; spic. involucr. lanceolatis longissime acutatis, glabris; spicula hermaphr. tenuiter puberula; arista longa; spicis terminalibus cuspidatis.

Hab. in Nova Hollandia, Gaudich.

12. **ANTHISTIRIA LAXA** Anders. l. c. p. 15.

Culmo gracili, c. nodis glaberrimo; f. anguste linearib., inferne ciliatis, vaginis vel e tuberculis pilosis; panicula rara elongata racemosa, pedunculis longis laxis fasciculos solitarios vel geminos gerentibus; bracteis foliiferis, ad marg. vaginae tuberculatis et pilosis, bracteolis brevibus, etiam fere foliiferis, glabris; spiculis invol. lanceolatis acutis glabris v. pilis paucissimis ad ap. ciliatis; spic. hermaphr. lata, eburnea; arista longa; spiculis terminalibus lanceolatis acutis.

Hab. in Nepalia (Wall. n. 8775).

Est gramen insigne. Transitus tamen praebent nonnulla spicimina ad A. ciliatam.

13. **ANTHISTIRIA DEPAUPERATA** Ands. l. c. 15.

Culmo simplici gracili, c. nodis glabro; f. anguste linearib. acutatis c. vaginis nudis; panicula rara erecta, ramis strictis, fasciculos e spicis 2—3 compositos, ap. gerentibus; bracteis foliiferis, ad margines tenuiter v. crebre tuberculatis et pubescentibus, bracteolis subaphyllis glabris; spiculis invol. late ovatis acutatis ad ap. tuberculis paucis piligeris scabris; arista spicam duplo superante rectiuscula; spic. terminalib. acuminatis glabris.

Hab. in ins. Luzonia e Phillippinis (Cuming n. 1873 et 1673).

*** *Cymbaria* Ands. l. c.: Spicae solitariae, e media bracteola exsertae.

14. **ANTHISTIRIA CYMBARIA** Roxb. (fl. Ind. I. 255). — Anderson monogr. Andropog. p. 15.

Culmo valido, ap. pendulo c. nodis glabro; f. longissimis angustis c. vaginis glabris; panicula ramosissima secunda; bracteis et bracteolis aphyllis, angustis glabris, acutis; spicis anguste ovatis; spiculis invol. longissime acutatis, glaberrimis nervosis; spica hermaphr. eburnea acuta dorso glabra; pedicello glabrescente; arista gracili, spicam triplo superante, medio geniculata; spicis terminalib. acutis glabris.

Andropogon cymbarius Linn.; Wild.; Sprgl.
Cymbogon elegans Sprgl., R. et S.
Anthistiria Cymbaria Roxb. (Knth. en. I. 482), Steud. Syn. I. 399. n. 1.

Hab. in Peninsula Indiae or.

b. **CHRYSANTHISTIRIA.** Glumae spicularum involucrantium pilis longis fulvis vel rufescentibus densissime hirsutae. Spicae discretae, solitariae e bracteolis plus minus exsertae:

15. **ANTHISTIRIA ARUNDINACEA** Roxb. (fl. Ind. I. 256). — Anders. l. c. p. 16.

Culmo erecto valido, c. nodis glabro; f. longissimis rigidis, marg. scabris, c. vaginis ore pilosa glabris; panicula pl. m. elongata, ramosissima densa; spicis longissime pedunculatis solitariis erectis; pedunculo scabro piloso; bracteolis aphyllis, glaberrimis; spiculis involucr. cuspidato-aristatis, pilis fulvis longissimis, subdivaricatis densissime hispidis; spicula hermaphr. aureo-hirsuta, spiculis terminalibus aristato-cuspidatis, hispidis; arista spicam 6—10 ies superanta.

Anth. arundinacea Roxb. (Knth. en. I. p. 482). (Steud. Syn. p. 401. n. 22.)

Var. *effusa:* panicula subrara (fere ut in Avena fatua), pedunc. protractis, laxis, tomento spicularum aureo-nitente.

Var. *contracta:* panicula valde elongata, ramosissima et condensata, tomento spicularum opaco.

Hab. in Bengalia, Nepalea, Himalaya: Kunamur.

* *subsericans* Nees.

Culmo minus valido internodiis summis saltem inferne pilosis, f. subt. pilosis, spicis e bracteolis longius exsertis, pedunculis pilis cinerascentibus divaricatis hirsutis, spiculis brevioribus, pilis rariorib. erectis obsitis; arista breviori.

Anth. subsericans Nees (Steud. Syn. I. 401. n. 23.)

Haec forma mihi ab *A. arundinacea* Roxb. non adeo distincta videtur, ut propriam constituat speciem. (Ands. l. c.)

16. ANTHISTIRIA VULPINA. — Anders. Androp. monogr. I. p. 17.

Culmo erecto crasso glaucescente, intra nodos, glabros hirto; f. strictis angustis marg. revolutis laete viridibus, vaginis superne brevissime ferrugineo-ciliatis; panicula elongata, angustata, ramis brevib. divisis; spicis quasi in fasciculos raros subapproximatis, bract. foliaceis ad marg. tuberculatis et pilosis, bracteolis aphyllis, glabris, spiculis involucr. acutissimis, grosse tuberculatis et dense fulvo-hispidis; spic. hermaphr. dorso appresse cinereo-fusco-tomentosis, arista spicam triplo superante; spiculis terminalibus acuminatis fulvo-hirsutis.

A priore differt: culmo multo graciliore caet.

Habit?

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17. ANTHISTIRIA BRACHYANTHA Boiss. diagn. XIII. p. 71.

A. perennis glauca radice fibrosa caespitosa, culmis erectis simplicibus teretibus flavidis foliosis parte superiori obtuse angulatis, foliis linearibus planis rigidulis inferioribus secus vaginas superioribus ad basin limbi sparsim setis longis e tuberculis ortis obsitis margine et ad nervos scabris, ligula brevi truncata fimbriolata, fasciculis spicularum 4—5 pedunculo filiformi suffultis infimo remoto caeteris terminalibus omnibus nutantibus singulis spatha glabra lanceolata acuminata plicata suffultis iterum in 3—4 glomerulos spathis lanceolatis dimidio minoribus suffultos divisis, glomerulorum 1 vel 2 e spiculis hermaphroditis masculisque caeteris e spiculis neutris muticis tantum constantibus, spiculis neutris vel masculis sessilibus basi glabris, glumis exterioribus viridibus oblongo-lanceolatis cucullatis acutis dorso multinerviis margine rufescenti-membranaceis superne setis nonnullis e tuberculis crassis ortis obsitis, glumis interioribus hyalinis. spicula hermaphr. pedicello longe rufescenti barbato suffulta ad apicem pedicelli 2 spiculis abortivis subulatis viridibus iterum pedicellatis aucta biglumi, glumis aequilongis oblongis obtusis subcoriaceis exteriori apice breviter puberula interiorem arcte involventi, arista flosculi rufa contorta inferne hirsuta spiculas multoties superanti spatha fasciculorum fere longiori.

Hab. in siccis dumosis Syriae littoralis ad radices australes jugi Cassii inter Laodiceam et Suadieh. Legi Junio 1846.

Circ. tripedalis, folia radicalia fere sesquilineam lata 4—6 pollices longa, spicularum neutrarum bracteae $3^1/_2$—4 lin. longae, arista sesquipollicaris.

Cfr. Anders. in monogr. Andropog. I. p. 11.: Incertus sum utrum ad Anth. ciliatam vel glaucam pertineat an ut propria species habenda sit.

18. ANTHISTIRIA SYRIACA Boiss. diagn. XIII. p. 72.

A. perennis glauca radice ...., culmis parce ramosis inferne obtuse superne acutiuscule angulatis supra nodos incrassatis, foliis glaberrimis linearibus planis rigidulis utrinque scabridis, ligula brevi ovata fimbriata fasciculis pedunculis filiformibus suffultis nutantibus 2—5 in culmi parte superiori, inferiori remoto, omnibus spatha lanceolato-lineari longe acuminata plicata inferne marginibus ciliata suffultis iterum e 3—4 glomerulis constantibus, glomerulis omnibus e spiculis marginalibus neutris sessilibus centralique pedicellato hermaphrodito constantibus singulis spatha lanceolata minori eis paulo longiori stipatis, spicularum neutrarum glumis exteriorib. oblongo-lanceolatis acutis viridibus multinerviis margine membranaceis superne setis parcissimis e tuberculo ortis obsitis, glumis interioribus hyalino-membranaceis, spicula hermaphrodita ad pedicelli rufosetosi apicem 2 spiculis quoque pedicellatis rudimentariis neutris viridibus lanceolatis obsita, glumis albidis coriaceis aequilongis obtusis exteriori apice hirto-scabrida interiorem arcte involventi, arista flosculi contorta rufescenti spiculis multo longiori spatham fasciculorum aequanti.

Hab. in regione sylvatica inferiori jugi Cassii in Syria boreali ubi legi non procul a praecedenti Jun. 1846.

Planta praecedenti major, folia longiora semper glabra, fasciculorum spatha 3—4 nec bipollicaris margine inferne ciliata nec glaberrima, glumae spicularum neutrarum majores acutiores 5—6 lineas longae setis parcissimis e tuberculo minori ortis, spiculae neutrae binae ad basin floris hermaphroditi sitae lanceolatae nec subulatae. — *A. glauca* Desf. huic speciei affinis differt culmo compresso, glumis florum neutrorum praeter cilia nonnulla ad apicem sita tuberculis prorsus destituta glaberrimis, pilis secus pedicellum floris hermaphroditi sitis multo brevioribus aliisque notis. *A. punctata* Hochstetter ex Abyssinia affinis quoque, spathis undique hispidis pilis e tuberculis nigris ortis, glumis longe pilosis, etc., statim distinguitur.

Cfr. Anders. in monogr.' Andropogonearum p. 11: „Incertus sum utrum ad Anth. ciliatam v. glaucam pertineat an ut propria species habenda sit."

19. ANTHISTIRIA SUBGLABRA Büse. — Büse in pl. Jungh. III. p. 368.

Fascic. spicularum parvis, partialibus remotiusculis patentibus in summo culmo positis, involucris glabris aut raris verrucis obsitis, glumis spicular. verticillatarum glabris, ovatis, crassis; culmo compresso, glabro.

Hab. Sumatrae graminosa vasta, Padang lawas dicta, pr. Pertibi. Horn. in herb. Jungh.

Clariss Andersonius in Andropogonearum monographia sua I. p. 11. de hac specie affert:

Superest aliquid dubio, anne sit Anthistiriae ciliatae extrema variatio; transitus vero desiderantur.

Forsitan ad Anth. scandentem pertinet!

ANDROSCEPIA Brongn. (Knth. en. I. p. 483).

(Anders. Andropog. monogr. I. p. 18. tab. III.)

Paniculae axis continua. Spicae bracteolis involutae v. suffultae, e spiculis 9 v. plurib. compositae. Spiculae 4 externae subaequaliter sessiles, masc. v. neutrae, quasi involucrum formantes, spiculae centrales pedicellatae, 2 v. plures fertiles, 3 v. plures a b. fertilium pedicellatae, masc. v. neutrae.

1. ANDROSCEPIA TREMULA Nees (Steud. Syn. 401 n. 19). — Anders. monogr. I. p. 19, cfr. l. c. descr.

Var. *hispidissima* Andrs. l. c.

Panicula densiori, fasciculis spicar. majorib.; glumis spicul. masc. longissime albohispidis; arista multo longiori.

Hab. in Ind. or. et in ins. Ceylon.

Culmus 2—3 ped. caet.

2. ANDROSCEPIA GIGANTEA Brongn. — Anders. monogr. I. p. 19, cfr. l. c. descr.

α. *mutica*: spiculis involucrantibus glabris marg. villoso-ciliatis; spiculis fertilibus dorso longitud. glabrescentib. muticis v. arista minima subarmata.

Andr. gigantea Brogn. Knth. en. I. p. 484., Steud. Synops. 402. — Büse pl. Jungh. III. p. 369. — Blanco Filip. 33.

Hab. in India or. pr. Calcutta; in Ceylon et in Java. Etiam in ins. Luzonia.

β. *Himalayensis* Rupr.: panic. maxima flavo-violacea; spicula fertili dorso costata, in interstitiis tomento brevi, flavo-ferrugineo obtecta; arista recta, spicula duplo longiori armata.

Hab. in India or. (Himalaya, Massuri).

γ. *armata* Anders. l. c.: panicula subrara, colorata; spicula fertili dorso fere to[t]
fusco-villosa; arista recta, spicula duplo longiori armata.

Anthistiria villosa Lam. (Kuth. en. I. 483.)

Nonne huc etiam pertinet: *A. caudata* Nees. (Steud. Syn. p. 402. n. 28) ex Chin[a]
Hab. in ins. Java et in India or.

Culmus pluripedalis, validissimus, caet.

3. ANDROSCEPIA ANATHERA Nees. — Anders. monogr. Andropog. I. p. 21.
Panicula elongata rara; ramis erectiusculis, laxe flaccidis, a medio divisis, c. ra[-]
mulis vaginatis; bract. foliiferis c. bracteolis aphyllis glabris spiculis involucrantib[us]
lanceolatis acutis e tuberculis pl. m. hispidis; pedicellis glabris; spiculis hermaph[r.]
muticis, anguste lanc. acutissimis dorso pallidis, superne scabriusculis; spiculis masc[.]
pedicellatis angustis, violaceis; culmo erecto superne ramoso et nutante, c. nodi[s]
glabris; f. longis flaccidis angustis, c. vaginis glabris v. subtus parce pilosis.

Anth. anathera Nees ms. (Steud. Synops. 402. n. 32).

Var. *glabrescens:* spiculis involucrantibus tantum marg. e tuberculis pilosis; spi[-]
culis terminalibus glabris.

Var. *hirsuta:* spiculis invol. totis e tuberculis longe hispidis; spiculis terminali[bus]
ap. pilosis; panicula subracemosa, ramis simplicioribus.

Hab. in India or., pr. Calcutta, Nepalia, Himalaya: Kunawur et Massuri.
Culmus tenuis, caet.

ISEILEMA Anderson.

(Anders. monogr. Andropog I. p. 22. tab. III.)

Panicula axi continua. Spicae bracteolis suffultae, e spiculis septem compositae; spiculae 4 inferiores masc. v. neutrae, omnes aequaliter pedicellatae, verticillatae; spiculae centrales pedicellatae 3, una fertilis aristata, 2 a b. spiculae fertilis pedicellatae, masculae v. neutrae.
(Nomen a ἴσος aequales et εἴλημα involucrum.)

Est genus quam habitu tum notis a caeteris distinctissimum!

1. ISEILEMA PROSTRATA Anders. l. c.
Panic. abrupta ramis spicigeris b. vaginis folior. inclusis, divisis; bracteis foliiferis glabris bracteolis scabriusculis; spicis solitariis e bracteolis parum exsertis, approximatis; spic. involucr. glumis ext. lanceolatis nervosis marg. ciliatis; spicula fertili glabra, bidentata, convexa, sub ap. nervosa; arista mox geniculata, spiculam triplo superante: f. brevib. planis, obtusiusculis, marg. scabris; culmo prostrato vel nodis glabro.

Andropogon prostratum Lin. Mant. 304.
Anthistiria prostrata Willd. (Kth. en. I. 482.)
Anth. Linneana Steud. Syn. 401. n. 13?
A. cimicina Edgew. (Steud. Syn. n. 11)?

Hab. in India or. (Wall. Wight.)

2. ISEILEMA WIGHTII Anders. l. c. p. 23.
Panic. interrupta ramis spicigeris b. vaginis inclusis; bracteis foliiferis et bracteolis in carina tuberculatis, spicis subsolitariis, pedunculo elongato exsertis; spic. invol. costatis marg. tuberculatis, superne ciliatis; spicula fertili sub ap. bidentata binervi scabra; f. brevib. planis acutiusculis, marg. scabris; culmo geniculatim adscendente.

Anth. glandulosa Wight n. 168. — *A. Bladhii* Wight n. 166.
Anth. Wightii Nees ms. Steud. Syn. 400 n. 12. (I. prostratam cum hac conjungens.

Hab. in India or., in Nepalia, Himalaya, Kunawur.

3. ISEILEMA ARGUTA Anders. l. c. p. 24.

Panicula dissoluta; ramis spicigeris b. vaginis inclusis divisis; bracteis late foliiferis glabriusculis v. superne ciliatis, bracteolis foliiferis tuberculato scabris; spicis confertis, pedunculo subincluso bracteola involutis; spiculis involucrantibus valide costatis, acutis marg. tuberculatis; spicula fertili ap. subherbaceo producta, nervosa et spiculas pedicellatas centrales masculas superante; f. elongatis, latis, versus ap. subrotundatum spinuloso-scabris; culmo erecto valido.

Anthistiria arguta Nees (Steud. Syn. 401 n. 14).

Hab. in montib. Indiae or. (Wall. cat. n. 8769.)

Est hujus generis optime evoluta forma.

4. ISEILEMA MITCHELLII Ands. l. c. p. 24.

Panicula parva, subterminali; pedunculis bractea late foliacea inclusis; spicis fasciculatim conglobatis et bracteolis foliaceis involutis; spiculis involucrantibus late oblongis, valide costatis glabris; spicula fertili mutica, dorso longitudinaliter impressa, acuta; spiculis pedicellatis masc. centralib. fertili subbrevioribus, minutis viridulis, glabris; f. brevib. latiusculis; culmo parvo adscendente c. nodis glabro.

Hab. in Nova Hollandia inter. (Majo; Mitchell.)

Culmus semipedalis caet.

Est species valde singularis, staturam obesiorem et contractam e locis natalibus aridis et arenosis sine dubio nacta.

EXOTHECA Anderson.

(Anders. monogr. Andropog. I. p. 25. tab. III.)

Infloresc. spiciformis. Spicae sessiles alternae solitariae, nullo modo bracteatae, e spiculis septem compositae. Spiculae inferiores 4 involucrantes, sessiles, masculae; centralis fertilis, duabus masculis a b. hermaphroditae pedicellatis. Glumae spiculae hermaphroditae coriaceae, convolutae, costatae, appendice apicali herbaceo cucullato auctae.

(Nomen a ἐξ absque et ϑηκη theca, ob defectum bracteolarum.)

EXOTHECA ABYSSINICA Anders. l. c.

Spiculis involucrantib. oblongis, supra medium sublatiorib., viridulo-striatis, marginatis; spiculae fertilis gluma exteriori glabre nitente; arista longissima; spiculis masculis terminalib. anguste lanc.; f. angustis c. vaginis glabris; culmo stricto, simplici, c. nodis glabro.

Anth. Abyssinica Hochst. (Steud. Syn. 400 n. 8.)

Hab. in Abyssinia.

Tota planta stramineo-glaucescens caet.

948. APLUDA L.

(Kunth. en. I. 516.)

Linn. gen. n. 1147. Endl. gen. n. 948. Trinius Act. petrop. 1833 p. 224. Nees ab Esenb. Act. Ac. Nat. Car. XIX. Suppl. I. p. 191. Knth. Agr. p. 516. Steudel Synops. p. 403. Andersson Öfversigt af Wet. Acd. förh. Stockholm 1855 p. 176. tab. V.

Synopsis specierum:

1. Pedicellus communis spiculam sessilem subaequans *A. rostrata* Nees.
2. „ „ spicula sessili (multo) brevior:
   a) Spicula sessilis hirta:
   Pedunculi et bracteolae glabri .... *A. communis* Nees.
   „ „ „ pilosi .... *A. ciliata* Anders.

b) Spicula sessilis glabra:
 *aristata:
 Pedunculi et bracteolae glabri.......... *A. aristata* L.
 „ „ „ pilosi........... *A. scabra* Anders.
 **mutica.................................. *A. mutica* L.

Apl. villosa Schreb. et *Apl. digitata* e genere eliminandae, ut jam monuit Nees.

1. APLUDA CILIATA Ands. l. c. p. 177. tab. V.

Panicula effusa, lanceolato-elongata, apice nutante; fasciculis remotiusculis; spicis incurvis; bracteola spica dimidio breviori sub cuspide herbacea bidentata, hyalino-marginata, subciliata; pedicello communi brevi, incrassato; spiculae fertilis gluma exteriori pedicellos hirtos superante, extus puberula, interiorem bidentatam in carina superne scabram aequante; arista spiculam fere triplo superante, medio geniculata, superne flavescente; spicula tabescente dorso puberula; mascula terminali glabra; foliis petiolatis; supra subpilosis, viridibus, latis, vaginis margine e tuberculis pilosis.

Hab. in Asia (India orientali, Caruar: Hügel n. 1639).

Est *A. communi* maxime affinis, sed abunde differt: culmo multo elatiori et crassiori evidentius compressiusculo; foliis duplo longioribus (fere pedalibus) et latioribus ($^{3}/_{4}$ unciam), supra pilis e tuberculis minutis egredientibus, parcissime pilosis basi longe petiolatis; sed maxime panicula et spicis. Panicula etc.

2. APLUDA ARISTATA Ands. l c. tab. IV. — L. Amoen. acad. 4. p. 303. sp. 1487. Thbg. prodr. 21. Schreb. gram. 2. t. 42. Willd. Sp. pl. 4. 938. Lam. ill. t. 841. R. S. Syst. II. 841. Trin. Act. Petrop. p. 325. Kth. Agr. 516. Steudel Synops. p. 410 n. 1. — *Diectomis fasciculata* P. B. Agr. 160 (sec. Nees). — *Andropogon glaucus* Retz. obs. V. 20. Willd. Sp. IV. 2. 910 (sec. Nees, cui synonymon *Apludam glaucam* Schreb. Gram. II. 98 habet; Steudel Synops. l. c. n. 9). — *Apluda microstachya* Nees l. c. pag. 193.

Hab. in India orientali (Wight n. 1712. Wallich. n. 8760. Hügel n. 2102 et 3271. Schnerat, Brown) in Ceylon (Reynaud) et in Manila (hb. vindob.)

a) grandis: panicula ob ramos elongatos patentes effusa; spiculis 3—4 lin. longis; glumis exterioribus spiculae fertilis basi laevibus.

β. *contracta:* ramis abbreviatis, fasciculis condensatis, coloratis.

b) minor: panicula subsimplici, erectiuscula, elongata; spiculis 2—3 lin. longis; glumis exterioribus basi subnervosis. (*A. microstachya* Nees loco supra citato.)

**nervosa* Ands. Panicula valde interrupta, ramis geminis arrectis, brevibus; fasciculis 2—3-spicatis, discretis; spiculis lateralibus horizontaliter divergentibus; bracteola spicam plus dimidio involucrante; spiculae fertilis gluma exteriori valide nervosa, viridi, subovali; spiculae masculae glumis carinatis, nervoso-striatis.

Hab. in India orientali (Hügel n. 2682).

A vulgari *Apluda aristata* L. non parum recedit panicula strictissima, ramis brevibus arrectis veluti pectinato-spicatis, spiculis fere duplo minoribus, gluma exteriori spiculae fertilis tota valide nervosa, arista breviori, infuscata et foliis brevioribus. Unum tantum specimen vidimus, quare id specie distinguere non audemus.

3. APLUDA SCABRA Ands. l. c. p. 179. tab III.

Panicula ramosa; ramulis et pedunculis strigosis; bracteis margine e tuberculis hirtis; bracteola cum cuspide subulata spiculas subaequante; spicis rectiusculis; spiculae fertilis gluma exteriori lineari-oblonga, nervoso-costata, spicula tabescente, spiculae vix glumacea, sublongiori, gluma interiori glaberrima; arista mox geniculata, tota torta, spiculam duplo superante, infuscata; spiculae terminalis glumis acutis; foliis basi angustatis, scabris.

Hab. in Nepalia, Wallich. n. 8760 h.

Apludae aristatae tam affinis, ut valde dubius sim, num ab ea specie removeatur. Aliena tamen videtur, non tantum habitu toto exteriori, sed etiam structura foliorum, paniculae et spicularum. Folia enim etc.

4. APLUDA MUTICA (Linn. sp. pl. 1486. — Anders. l. c. tab. VI.) — Willd. sp. pl. 4. 938. Lam. ill. t. 871. Nees A. L. C. N. X. l. c. p. 192. Trin. l. c. p. 325. Kth. Agr. 516. Steudel. Synops. p. 403 n. 4. — *Calamina mutica* P. B. Agrost. 129. R. S. 810. — *Calamina gigantea* P. B. Agr. p. 129. — *Andropogon glaucum* Retz. (sec. Trinium). — *Apluda geniculata* Roxb. 1. 325. Kth. 517. (sec. Nees.) Steudel Synops. p. 404. n. 7.

Hab. in Coromandelia (Macé), Java (Blume et Thunberg), China (Meyen et Osbeck), Nova Caledonia (Labilladère) et Luzonia (Chamisso).

**A. humilis* Ands. l. c. tab. VI b. Presl. Rel. Haenck. 314. sub Calamina: Panicula magis effusa; fasciculis longius remotis; spicis basi ovato-gibbis; spicula sessili tabescente longiori, basi sublaevi; spicula tabescente fere tota ad pedicellum redacta, apice tantum medio virescenti-glumacea; bracteola late ovali, spiculam dimidiam superante; culmo graciliori. — *A. humilis* Steudel Synops. p. 401. n. 3.

Hab. in Luzonia (Cuming n. 635).

A vera *A. mutica* me judice non ita recedit, ut speciem propriam efficere possit. Transitus evidentes invenimus.

***A. mucronata* (Steud. Synops. p. 401. n. 6—?) Anders. l. c. tab. VI c.: Panicula magis contracta; fasciculis subconfertis; spicis oblongo-linearibus; spicula hermaphrodita tabescente evidentius longiori; spicula tabescente apice glumacea; bracteola spicam dimidiam involvente, cuspide elongata, herbacea, scabra mucronata.

Hab. in Manila (Meyen), et insula Bourbon (Gaudichaud).

Habitu panicula et spicularum sed inprimis bractearum insignis, certissime autamen mera varietas. Quid Steudel suo nomine significat haud bene liquet; in nostram tamen diagnosis proxime quadrat.

Formam ab *A. humili* ad *A. mucronatam* aperte transitoriam misit Wallich (n. 8760 k' et l') ex horto Calcuttensi: quae bracteola herbaceo-cuspidata, spiculis magnis, fasciculis et foliis obscure viridibus a ceteris non parum recedere videtur.

950. ANDROPOGON Linn.

(Walp. Ann. III. 796.)

1. ANDROPOGON AMAURUS Büse. — Büse in pl. Jungh. III. p. 360.

Spicis subsolitariis, f. supremo diu semi-inclusis; spiculis latis, sessilib. saepe biserialibus, pedicellatis nonnunquam sessilib. conformib.; glum. fusco-hirtis pilis nitentibus; f. vaginisque sparse pilosis, culmo prostrato.

Hab. ins. Javae (Zoll. n. 599 in herb. Acad. L. Bat.), in pratis pr. Bedojo, haud longe a monte Sewu (Jungh.).

Pl. prostrata; ram. erectis, spithamaeis, geniculatis, compressis. F. lanceol., hirsutie varia.

2. ANDROPOGON (??) ASTICTUS Büse. — Büse in pl. Jungh. III. p. 360.

Ramis paniculae ovatae subverticillatis, flexuosis: pedicellis valde barbatis; spiculis planis, lanceol., sessilib., b. parce setosis; glumis omnibus breviter et rigido ciliatis; arista glumellae spiculam ter quaterne superante; culmo terete c. f. linearib. glabris nodis vix pilosis.

Hab. ins. Sumatram, in graminosis vastis pr. Pertibi. Horner in herb. Jungh.

3. ANDROPOGON HIRTUM L. (Cod. 7556). Steud. Synops. p. 384.

β. *longearistatum* Willk. (et Lge. Prodr. fl. hisp. I. p. 47): Vaginae glabrae, spicae laxiores, longioresque, aristae spicula fertili sextuplo longiores (a forma genuina

praeter aristam elongatam vix ac ne vix quidem differt. Occurrunt etiam formae intermediae !).

A. pubescens Vis. pl. dalm. Rchb. ic. f. 1499.

Hab. in Hispania sat frequens, ut in Castell. nova, Catal., Regno Valent., Murcic. in Granat. abundat.

4. ANDROPOGON (SORGHUM) HALEPENSE Pers. Sibth. — Steud. Syn. p. 394.

α. latifolium Willk. (Prodr. fl. hisp. I. p. 48): Culmi 5' l., foliorum limbus 1½–2' long. et ¾–1" lat. ad basin extus villosus, panicula pedalis et ultra.

Hab. in Hispania: Vega de Motril ad fossas agrorum Gossypii. —Cf. infra p. 1071.–

5. ANDROPOGON (SPODIOPOGON) POGONANTHUS Boiss. et Balansa in Bul. pl. orient. exsicc. n. 1338 (1857). Balansa Bullet. de la Soc. bot. de France 1856 p. 168.

Rhizoma caespitosum, subrepens. Culmi erecti, ramosi, cylindrici, laeves, glabri, parte inferiore saepe perennantes. Folia lineari-lanceolata, sensim acuminata, plana glabra vel tantum basi pilosa; ligula membranacea, ovali obtusa, saepe laciniata; vaginae glabrae laeves, usque ad basin fissae. Panicula terminalis, ramosa oblongo-lanceolata, contracta. Spiculae homogamae, biflorae, terminales ternatae spiculis lateralibus pedicellatis caducis, media sessili persistente; ceterae geminae, una pedicellata caduca, altera sessili persistente. Flosculus infer. spicularum masculus, superior et hermaphr. Glumae oblongo-lanceolatae, acuminatae vel sat longe aristatae, flosculos aequantes vel subsuperantes, inferior 5—7-nervia, superior 3-nervia.— *Fl. masc.* Palea inferior oblongo-lanceolata, glabra, hyalina, membranacea, obsolete nervosa, acuminata vel in aristam rectam dimidio longiorem sensim attenuata; palea superior oblongo-lanceolata, acuminata, enervia, brevior. Antherae glabrae, lanceolatae, biloculares. Lodiculae 2, glabrae, truncatae. — *Fl. hermaphr.* Palea inferior superiorem aequans bipartita, laciniis linearibus acuminatis, e sinu aristam ea ter longiorem geniculatam inferne tortam emittentib.; palea superior elliptico-lanceolata, hyalina, basi nervis 2 opacis notata. Lodiculae 2 glabrae ovales, truncatae et bilobae. Ovarium glabrum oblongum; styli 2 terminales; stigmata plumosa stylis sublongiora. Caryopsis libera, oblonga, cylindrica stylis basi persistentibus apice notata; hilum punctiforme; embryo dimidium caryopsidis aequans v. superans. — ♃ Juli.

Hab. in collibus siccis et lapidosis Phrygiae prope Éklair-Keüi, Ouchak, Kalaguesi-Déré 1900 m.

Est affinis *Andr. Sibirico* Trin., sed differt foliis angustioribus basi vix attenuatis, glumis villosioribus et aristis longioribus robustioribusque.

Trinius et post eum auct. flosculum superiorem spiculae in *Androp. Sibirico* femineum descripserunt, staminum filamentis solis evolutis. In hue autem mihi hermaphroditus est visus.

950ᵇ. TRACHYPOGON Nees; in Mart. Fl. Br. I. p. 341.
(*Andropogon* L.; Willd.; H. K. et Steud. Synops.)
(Anders. Öfs. of K. Vet. Ak. Fock. d. 11. Förh. 1857.)

Spiculae geminae, altera sessilis mascula v. neutra et mutica, altera pedicellata fertilis et aristata.

Descriptio: Gramina admodum elata, perennia. Culmus stricte erectus, teres, nodis saepe barbatis. F. plerumque convoluto-filiformia; vaginae constrictae; ligula plus minus protracta. Spica terminalis solitaria aut plures conjugatae alternatim subdigitatae. Rhachis contigua ad pedicellos pilosa. Spiculae geminae, altera subsessilis, altera in pedicello articulatione in medio obliqua pedicellata. Spicula sessilis: glumae subaequilongae, convolutae, cartilagineae, exterior oblongo-cuneata, dorso 5—7 nervis, ap. truncata, interior angustior, acuta tricostata; flosculi duo, unipaleacei, utrique masculi. Spicula pedicellata glumis fere ut in spicula sessili, sed angustiores et vulgo

hirsutiores; flosculi duo, inferior neuter, muticus, bipaleaceus; superior bipaleaceus hermaphroditus; palea exterior minutissima integra in aristam attenuata, interior minima v. nulla. Lodiculae crassiusculae plicatae et truncatae v. bidentatae. Stam. 3. Stigma plumosa a latere spicularum erumpentia. Caryopsis libera.

Synopsis specierum:

a) Spica solitaria:
 α. foliis convoluto-filiformibus:
  * hirtis: *T. canescens* Nees.
  ** glabris: *T. micans* Ands. *T. capensis* Trin. *T. Montufari* Nees. *T. violaceus* Ands.
 β. foliis planiusculis:
  T. truncatus Nees. *T. Preslei* Ands.

b) Spicae geminae ternae vel quaternae conjugato-digitatae:
 α. foliis glabris;
  T. gracilis Ands. *T. dissolutus* Nees.
 β. foliis hirtis:
  T. plumosus Nees. *T. vestitus* Ands.

1. **TRACHYPOGON CANESCENS** Nees (Mart. Fl. Bras. I. p. 343). Anders. l. c. p. 47.
Spica stricta, elongata, rachi pubescente; spicula sessili lineari-oblonga, obtusa, gluma exteriori dorso 5-nervi et longissime villosa, gluma interiori etiam hirsuta, apice setigera; spiculae pedicellatae gluma exteriori dorso nervosa, longe pilosa, basi argenteo-barbata, apice rotundata, gluma interiori longiori; arista longissima, geniculo toto inferiori villoso-plumoso; foliis densissime villoso-sericeis; ligula oblonga; culmis caespitosis.

Andropogon canescens Steud. Synops. p. 368. n. 58.

Hab. in Brasilia australiori (vidi in herb. reg. berol.)

Differt a T. Montufari, cui proximus: villo culmi et foliorum denso albo-argenteo, ligula breviori, spiculis quasi evidentius distichis, spiculae inferioris gluma exteriori longissime villosa, interiori subsetigera, glumis spiculae fertilis angustioribus, interiori longiori, arista breviori, rectiuscula.

Radix repens. Culmus tripedalis, crassitie pennae columbinae, simplex, teres, sub spica villosus. Folia filiformia, laxiuscula, inferiora culmum aequantia. Spica 4—5-pollicaris, rachis ad insertionem spicularum villoso-barbatula.

2. **TRACHYPOGON MICANS** Anders. l. c. p. 47:
Spica elongata, cylindrica, flexuosa, rachi glabrescente; spicula sessili lineari-oblonga, obtusa, immarginata, gluma exteriori 5-nervi, pubescente, interiore glabrescente; spiculae pedicellatae gluma exteriori dorso nervosa, breviter pubescente, apice rotundata, gluma interiori longiori; arista longissima, longe argenteo-plumosa, foliis convoluto-filiformibus glaberrimis; ligula brevi, ovata; culmo stricte erecto glabro; nodis barbatis.

Hab. in Brasilia (leg. Sellow. In herb. reg. berolinensi et vindob. vidi). A Widgren in Brasilia lecta in herb. Holmiensi asservantur specimina.

Est inter T. canescentem et T. Montufari prorsus medius. Convenit cum illo glabritie culmi et foliorum, cum priori spiculis angustis et pubescentibus. Ab utroque tamen differt: gracilitate culmi, tenuitate foliorum et longitudine spicae (quae fere 10-pollicaris!), sed praesertim arista fere tota ciliis longissimis subviolascentibus et sericeo.-micantibus densissime plumosa. Spiculae saltem inferiores (i. e. subsessiles) apice violaceae, pulchre discolores. *T. plumosus* Nees, secundum specimina in herbario Kunthiano, valde differt: spicis geminis vel immo ternis, hirsutie culmi et foliorum etc.

3. **TRACHYPOGON CAPENSIS** Trin. (Act. Petrop. Ser. VI. 2. p. 257):
Spica, elongata, recta, rachi et pedicellis glabris, ad insertionem spicularum barbatis; spiculae sessilis gluma exteriori dorso convexa, nervosa, saltem inferne hirta,

immarginata, gluma interiori acutissima, saepe seta brevi mucronata; spiculae pedicellatae linearis gluma exteriori obsolete nervosa, pubescente, obtusa, interiori truncata; arista bis geniculata, inferne dense plumosa, spiculam sexies superante; culmo stricto, simplici, glabro, nodis barbatis; foliis convoluto-filiformibus, glabris.

Syn. *Stipa spicata* Linn. Thbg. Fl. Cap. I. p. 107. (ex parte fide specim. orig. in herb. Trin.) sec. Nees.

Androp. spicatus Steud. l. c. p. 368. n. 59.

Trachypogon capensis Nees Gram. Afr. austr. p. 100.

Trachyp. tricuspidata: gluma exteriori spiculae fertilis apicem versus tricuspidata, glabriuscula; foliis omnino glaberrimis etuberculatis, adhuc magis filiformibus.

Hab. in rupestribus montium et in graminosis Africae australioris. (Vidi in herb. berolinensi, vindobonensi et Neesii).

Etiam haec species cum T. Montufari et affinibus valde convenit: sed differt aperte: foliis glaberrimis, spica magis rariflora, spiculis longioribus et angustioribus, sessilis gluma exteriori dorso magis cinerascente, glumae interioris nervo medio saepius in setam rectam, fulvam excurrente, apice summo violascente.

„Culmus $1\frac{1}{2}$—2-pedalis. Folia vix $1\frac{1}{2}$ lin. lata; Spica 1—2 poll. longa." Nees.

4. TRACHYPOGON MONTUFARI Nees (in Mart. Flor. Brasil. 1. p. 342). Ands. l. c.

Spica valde elongata, recta vel subflexuosa, rachi teretiuscula cum pedicellis puberula vel glabriuscula: spiculis subconfertis; spic. sessilis gluma exteriori oblonga apicem versus latiori, obtusiuscula, dorso convexiusculo puberula, superne alato-marginata, gl. interiori glabra; spic. pedicellatae gluma exteriori dorso convexo albo-villosa, apice rotundata, puberula, basi cinereo-barbata, interiori longiori obtusissima; arista medio geniculata, inferne pilosa, spiculam sexies superante; foliis convoluto-filiformibus glabra, ligula protracta, acuta; culmo nodis subobtectis glabro.

Andropogon Montufari H. B. K. n. gen. I. 184. R. S. S. V. II. p. 820. Spr. S. V. I. p. 281. Steudel Synops. p. 368. n. 56.

Hab. in campis aridis Brasiliae, isthmi Panamensi (Seemann) et Oersted et Mexico (ad Jalapam. Schlede). (Vidi in herb. Berolin. Vindobon. Neesii et Oerstedii).

Eximie variat haec species, generis centrum in formas ceteras radians. Variationes notabiliores sunt:

T. grandiflora: spicula sessili pedicellatam subattingente glabrescente et viridula, foliis fere setaceis.

T. pauciflora: spicula sessili vix ad medium pedicellatae attingente, extus magis pilosa, canescente; foliis planiusculis.

* *mollis* (Nees l. c. p. 343): Spicula sessili basin tantum spiculae pedicellatae attingente, spiculis longius et molliter pilosis, apice subbarbatis; arista subplumosa; spica graciliori; culmis magis caespitosis.

Andropogon mollis Steud. p. 368.

Forma e Mexico a brasiliensi recedit foliis planiusculis, culmi nodis barbatis. Cetera tamen plane eadem.

5. TRACHYPOGON VIOLACEUS Anders. l. c. p. 49:

Spica elongata, gracili, fere curvata, rachi et pedicellis spicularum barbatis; spiculae sessilis gluma exteriori lanceolata, medio latiori, apice viridi-nervosa, truncata, spicula pedicellata sessili angustiori, lineari-lanceolata; puberula; arista bis geniculata, adpresse sericea; culmi nodis nudis, barbatis; foliis convolutis glabris, ligula mediocri, subtruncata.

Hab. in Columbia (Merida: Moritz n. 1554. Vidi in herb. berolinensi).

Proxime cum T. Montufari * molli convenit, sed differt certe: spica fere duplo minori, tota violacescente, rachi non omnino obtecta, spiculis superne angustioribus nec marginatis, culmo adhuc teneriori, ligula breviori, nodisque barbatis. Nec tam caespitose crescere videtur; folia inferiora nonnihil planiuscula, superiora brevissima;

spica 3-uncialis; aristae arcte adpressae (fere ut in Heteropogonis speciebus), nec divaricatim plumosae.

6. TRACHYPOGON TRUNCATUS (Nees, sub Heteropogone: Afr. aust. p. 102?) Ands. l. c.
Spica lineari, stricta, acuta; spiculis sessilibus lineari-oblongis, gluma exteriori superne obtuse marginata nervosa, villosa, gluma interiori pubescente; spiculis pedicellatis teretiusculis, longe albo-hirsutis, gluma exteriori apice obtusa, interiori longiori; arista bis geniculata, parte inferiori villosa; foliis planiusculis, cum vaginis glaberrimis; ligula brevi, truncata; culmo erecto, nodis albo-villosis.

Variat:

T. brevespicata: Spica angustiori, 2-pollicari; spiculis brevius sed densius tomentoso-villosis, nodis culmi quandoque glabriusculis.

T. longespicata: Spica longiori, 3—4-pollicari; spiculis longius sed rarius villosis, nodis culmi densissime lanatis.

Andropogon truncatus Steud. Synops. p. 368. n. 51.

Hab. in Africa australi „in itinere per districtum Uitenhage a Krumrivier flumine trans Lamtonsrivier et Krakakamma Uitenhagam (Ecklon)" Nees l. c. (Vidi in herb. Neesii et berolinensi).

Culmus minus quam in T. Montufari elatus, e basi geniculatus, deinde strictus. Folia 2 lin. lata, demum margine involuta. Spicae pars superior aristis conniventi-contortis (fere ut in Heteropogone contorto) caudata; spiculae villosae ut in T. canescenti; aristae pars inferior sericeo-plumosa ut in T. micante. E quibus videtur quam difficile est species certas in hoc genere distinguere!

7. TRACHYPOGON PRESLEI Ands. l. c. p. 50.
Spica elongata, rachi cum pedicellis glabriusculis; spiculae sessilis gluma exteriori oblonga, elongato-cuneata, dorso convexo superne nervosa, apice marginato triloba, gluma interiori glabra; spiculae pedicellatae gluma exteriori dorso convexo glabriuscula, apice sublatiori, interiori longiori; arista spiculam quintuplo superante, bis geniculata, remotius plumosa; foliis elongatis, planis, cum vaginis glaberrimis, ligula protracta, acuta; culmo stricto, nodis subbarbatis.

Syn. *Heteropogon stipoides* Presl, Rel. Haenk. I. 335.

Andropogon stipoides Steud. Synops. p. 368. n. 50.

Hab. in Mexico (Haenke) et in Costa Rica, in monte El Viego; 3000' alt. ut etiam in Nicaragua: Oersted (n. 71. 74). (Vidi in hbb. berolin., vindob., Neesii et Oerstedii.)

Culmus 3-pedalis, pennam passerinam crassus. Folia culmea 2—2½ lin. lata, glaberrima; ligula 3 lin. longa, lanceolata, coriacea. Spica semipedalis, saepius rariflora; spiculae 2 lin. longae, angustae, pallide flavidae, apice infuscatae.

* *secundus:* spica tenuiori; spiculis angustioribus, inferiori minus dilatata dorso longius pubescente, arista longiori inferne plumosa; foliis angustioribus; nodis culmi inferioribus glabrescentibus. — *Heteropogon secundus* Presl. l. c. *Andropogon secundus* Steudel l. c. p. 49.

Hab. iisdem locis ac praecedens.

Haec forma a *T. Preslei* normali notis allatis satis recedit; ad eum tamen omnino se habet, ut *T. mollis* ad genuinum *T. Montufari*. *T. stipoides* Nees ab hoc etiam genere diversus.

8. TRACHYPOGON GRACILIS Ands. l. c. p. 50.
Spicis geminis elongatis, gracilibus, stricte erectis; rachi et pedicellis glabriusculis spicula sessili oblonga, gluma exteriori basi glabra, apice marginata, dorso convexa 7-nervi subpuberula; gluma interiori glabra 3-nervi acuta; spicula pedicellata anguste lanceolata, tereti, basi barbata, versus apicem obtusum obsolete nervosa; aristae dimidia parte inferiori breviter plumosa, superiori glabrescente, spiculam septuplo su-

perante; foliis convoluto-filiformibus, cum vaginis glaberrimis, ligula medioeri; culmo erecto cum nodis glabro.

— *hirtus:* spiculis latioribus, pedicellatis, apice pilosis

Hab. in Brasilia (Sellow. n. 5366, Gardner 3520). (Vidi in herb. vindob. et berolin.)

**ciliatus:* spicis ternis vel quaternis, longissimis, pallidis; spiculis longius pilosis et evidentius nervosis; ligula elongata.

Hab. in Surinam (Hostmann: 1028) et Columbia (Moritz: 728). (Vidi in herb. berolin.)

Habitu *T. molli* subsimilis, eique a Kunth in herbario associata. Culmus 3-pedalis, pennam passerinam crassus, omnino glaber, basi caespitosus. Folia culmo breviora stricta, sub-pungentia, glabra; ligula a basi ovata lanceolato-acuta; linea longior. Spicae vulgo conjugatae, pallide flavae, 2 lin. latae, subdensiflorae, longior semipedalis. Spicula sessilis 2 lin. longa, apicem versus vix latior, sed truncato-tridentata ala angusta scabriuscula pallida cincta; spicula pedicellata adhuc angustior, vix nervosa. Arista quam in ceteris longior, superne adhuc magis glabrescens, evidentius bigeniculata.

Forma, quam ciliatam appellavimus, e Columbia et Surinam, a brasiliensi sed parum differt. Spiculae e hirsutie plus minus densa incanae conspiciuntur, gluma exterior vix apice marginata, arista longius plumosa; vaginae nunc apice hirtae, nunc totae glabrae; ligula semper longius (3 lineas) protracta.

9. TRACHYPOGON DISSOLUTUS Nees (Linnaea XIX. 695. Anders. l. c. p. 51):

Spicis geminis vel ternis, elongatis, gracilibus stricte erectis, rachi et pedicellis glabris; spicula sessili oblonga, gluma exteriori dorso convexa glabra, basi subpuberula, apice marginata obtusissima subnervosa; arista inferne brevissime pubescente; foliis planiusculis, cum vaginis glabris, ligula longissima; culmi nodis barbatis.

Syn. *Andropogon dissolutus* Steudel Synops. p. 381, n. 224.

Hab. in Mexico (specimina in herb. Neesii vidimus).

A priori, cui certissime proximus differt: culmo firmiori, nodis pilis erectis rigidis dense barbatis, foliis longissimis fere 2 lin. latis, saltem intermediis planis, longe acutatis; spicis brevioribus, magis densifloris; spiculis majoribus, glabris, obsoletius nervosis magisque chartaceis; ligula demum unciam fere longa.

De *Trachypogone ligulari* Nees (Andropogon ligularis Steud. Synops. p. 381, n. 225), cujus specimen valde incompletum in herbario Neesii vidimus, quidquam certi enuntiare non audemus. *T. macroglossus* Trin. nobis incognitus. T. ligulari simillimus dicitur.

10. TRACHYPOGON PLUMOSUS Nees (Mart. Flor. brasiliensis, Gram. p. 344.) Anders. l. c.

Spicis subternis, elongatis, erectis, rachi glabra vel ad genicula pubescente; spiculis confertis, sessili oblonga, apice obtusa ibique glabrescente, ceterum puberula; gluma exteriori dorso 7-nervi, interiori glabra; spiculae pedicellatae gluma exteriori convexa, costato-nervosa, pubescente, apice rotundata; interiori longiori, acutiuscula; arista bis geniculata, inferne plumosa; spiculam multo superante; foliis elongatis planiusculis vel complicatis, regidulis, scabris, cum vaginis dense tomentosis; ligula exserta, ovata; culmo simpliciusculo, stricto, cum nodis adpresse barbatis.

Syn. *Andropogon plumosus* H. K. nov. gen. et sp. I, p. 149; R. et S. S. V. II p. 811. Spr. S. V. I. p. 285 Steud. Syn. p. 381, n. 223.

Hab. in Brasilia (Sellow.) (Vidi in herb. berolin. et Neesii).

Est *T. canescenti* tam propinquus, ut vix eum species jungerem nisi auctoritate aliorum. Culmus et folia omnino molliter sericeo-pilosa; spicae (quarum singula interdum tantum exstat!) quam in ceteris angustiores et longiores; spiculae sessiles apicem versus latiores, calvae, nervis viridibus evidentius notatis.

In herbario Neesii aliud adest specimen hoc nomine etiam inscriptum, quod differt foliis latis, planis, longissimis, glabris. Num integumentum foliorum in hoc genere ut etiam numerus spicarum variat?

11. TRACHYPOGON VESTITUS Ands. l. c. p. 52:

Spicis ternis, erectis, angustis; rachi glabra, pedicellis uno latere breviter villosis; spiculae sessilis, linearis, gluma exteriori nervosa, pubescente, interiori carinata, glabra: spiculae pedicellatae gluma exteriori dorso hirto, apicem versus glabrescente, valide nervosa; arista bis geniculata, tenuiter plumosa, spiculam multo superante; foliis strictis, planis, cum vaginis densissime albo-villosis; ligula longissima, lanceolata; culmo simplici, valido, stricto, sub nodis barbatis puberulo.

Hab. in Brasilia, Piauhy (Gardner 2342. Vidi in herb. vindobon.)

Differt ab omnibus haec species certe optima: culmo elato et crasso, foliis densissime cinereo-villosis, spicis tenuibus et gracilibus, ligula fere pollicem producta, angusta, flavescente.

E genere itaque excludendi:

Trachypogon rufus Nees = *Cymbantheliae* Sp. (C. hirtae affinis).
Trachypogon scrobiculatus Nees = Item.
Trachypogon argenteus Nees = *Erianthus saccharoides* Willd.
Trachypogon laguroides Nees = *Aphananthi species.*
Trachypogon Minarum Nees = *Andropog. paniculat. species.*
Trachypogon stipoides Nees = Item.
Trachypogon arenaceus Nees = Item.

950 b. SCHIZACHYRIUM Nees.

(Knth. en. I. 488. et seq. sub Andropogon).

1. SCHIZACHYRIUM PARADOXUM Büse. — Büse in pl. Jungh. III. p. 359.

Spic. termin. lateralibusq. plurimis capillarib. folio vaginatis, floris fertilis spicularum sessilium glumella mutica, spiculis pedicellatis hebetatis aristato-acuminatis, f. oblongo-linearibus.

Hab. ins. Sumatrae prope Padang (Jangh.)

950 c. CHRYSOPOGON Trin.

1. CHRYSOPOGON ACICULATUS Tr. (Kunth. Agr. p. 505). Büse in pl. Jungh. III. p. 361.

β. *longifolius* Büse fol. elongatis angustis.

Hab. ins. Javae. (Jungh.)

2. CHRYSOPOGON GRYLLUS Trin. — Explic. sc. de l'Algér. phaner. p. 51.

Andropogon Gryllus L. (Knth. en. I. 501.).

950/1. SORGHUM Mich. (Knth. en. I. p. 501.)

v. Schlechtend. Linnaea XXV. p. 171. observ.

Sorgho e nostra sententia species solummodo adnumerandae sunt, quae annuae paniculam gerunt compositam sed haud in rhachi articulatam, glumasque cartilagineas fructus includentes. Hujus loci sunt: S. vulgare, bicolor, cernuum, saccharatum nimia affinitate inter se junctae aliaeque formae affines nominib. distinctae, sed magis dubiae. Holcum Halepensem vero, cujus descriptio sequitur, in propriam sectionem vel ad proprium genus ducere mallem.

1. SORGHUM HALEPENSE L. sub Holco. — v. Schlechtend. l. c. (cfr. supra p. 1066. n. 4.)

Semen ex Aegypto acceptum, sub diu cultum, exeunte aestate laete floruit.

Gramen 4—5 ped. etc.

951. ISCHAEMUM Linn.

(Walp. Ann. III. 808).

1. ISCHAEMUM MUTICUM Retz (Kunth. agr. p. 512.) — Büse in pl. Jungh. III. p. 35

β. *erectum* Büse; procerum; fol. angustiorib. supremi vagina ampla, lamina subnulla. — An Tagadi Rheede Malab. XII. tab. 49?

951. IMPERATA Cyrill.

(Walp. Ann. I. 951.)

1. IMPERATA ARUNDINACEA Cyr. (Kunth. Agr. p. 477). — Büse in pl. Jungh. III. p. 35
Habit. ins. Javae et praesert. Sumatrae vulgatissima, ad alt. 3000' adscendens.

β. *glabrescens*; f. angustioribus convolutis, geniculis subglabris. —
Hab. in Sumatrae graminosis vastis, Padang lawas dictis, pr. Pertibi. Horner in herb. Jungh.

2. IMPERATA CYLINDRICA P. B. Explor. scient de l'Algér. phanerog. p. 41. = Imp. *arundinacea* Cyr. Knth. en. I. 477.

951 b. ARUNDINELLA Raddi.

(Walp. Ann. III. 804.)

1. ARUNDINELLA FUSCATA Nees mss. Büse. — Büse in pl. Jungh. III. p. 359.
Glumis herbaceis, infera ovata, breviore, glumellae inferae fl. hermaphroditi aristis lateralibus brevib., fol. latis vaginisque setosis.

β. *angustior* Nees mss.
Hab. ins. Javae prope Tjibogo et in monte Tjerimai. (Jungh.)

2. ARUNDINELLA TRICUSPIDULA Büse. — Büse in pl. Jungh. III. p. 360.
Glumis herbaceis, infera lanceolata paululum breviore, glumellae inferae hermaphroditi floris aristis lateralib. longis, f. angustis glabris, vaginis ore marginequa ciliatis.
Hab. insulam Sumatrae pr. Padang lawas, Horner in herb. Jungh.

β. *obscurior*; glumis chartac. Caeterum non diversa.
Hab. in Javae mont. ignivomorum cinere. Reinw. in herb. Acad. Lugd. Bat.

ASTHENOCHLOA Büse.

(Büse in pl. Jungh. III. p. 367.)

Panicula. Pedicelli apice dilatati spiculas cingunt setis congestis, ad quas pedicellus sterilis adstat perbrevis. Spiculae ovales, planae uniflorae; glumae subaequales, apice pilosae, b. setis longiorib., infera apice emarginata, supera lanceolata. Glumellae minimae; infera apice bifida ex incisura longissime et valide aristata aristae parte inferiori tortili, superiore plana serrata; glumella supera subnulla. Stigma .... Caryopsis ovalis, stylor. residuo bicornis.

1. ASTHENOCHLOA TENERA Büse.
Culmus ped., debilis, parce ramosus. Radix repens? F. lin., glabra, utrinque et margine scabra, infra hic illic pilis obsita; ligula brevis.
Hab. ins. Javae ad vias cavas montium, pr. Pidjungan in prov. Jogjakerta. (Jungh.)
Inter Andropogoneas recenseo, sed speciminum perfectiorum examen valde optandum habeo.

INDEX ALPHABETICUS

classium, ordinum, subordinum, tribuum, generum, specierum sectionum et synonymorum omnium

in

Annalium botanices systematicae

Tom. IV.—VI. obviorum.

Nomina classium literis Romanis maximis traduntur.
Nomina ordinum literis Romanis majoribus traduntur.
Nomina subordinum, tribuum et subtribuum literis crassioribus traduntur.
Synonyma omnia literis vulgaribus traduntur, sed signo „(s.)" ornata.
Nomina generum, specierum et varietatum literis vulgaribus traduntur.
Illis generibus et speciebus icon est adnotata quibus signum † oppositum est.
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— pallida hort. (s.) 591. no. 1.
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— Arnottianum Wight. ° IV. 36. no. 1.
— costatum Jack. IV. 36. no. 2.
— (s.) costatum Wall. IV. 36. no. 1.
— (s.) Wightianum Wall. IV. 36. no. 1.
— (s.) Wightianum W. et Arn. IV. 36. no. 2.
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— patula R. Br. 455. no. 1.
— ramiflora R. Br. 455. no. 2.
Actaea L. IV. 32.
— (s.) acuminata Wall. IV. 32. no. 1.
— (s.) arguta Nutt. IV. 32. no. 1.
— (s.) aspera Lour. IV. 37. no. 1.
— (s.) brachypetala DC. (excl. var. δ.)) IV. 32. 1.
— (s.) Cimicifuga L. IV. 32. no. 1.
— (s.) rubra Bigelow. IV. 32. no. 1
— spicata L. IV. 32. no. 1.
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— Bigelowii Gray ° 236. no. 1.
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Adansonia L. IV. 315.
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— filicornis Rchb. f. ° 900. no. 5.
— fragrans Rchb. fil. ° 899. no. 1.
— funalis Rchb. fil. ° 902. no. 16.
— gladiifolius Rchb. fil. ° 900. no. 2.
— Jamaicensis Rchb. fil. ° 901. no. 12.
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— micranthus Rchb. fil. ° 901. no. 8. †
— Organensis Rchb. fil. 901. no. 9.
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— hystrix Lindl. (s.) 500. no. 20.
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— maculosum Lindl. ° 897. no. 4.
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— matutina (?) Bl. (s.) 876. no. 3. †
— minimum Lindl. (s.) 500. no. 17.
— multiflorum Roxb. ° 896. no. 1.
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— pusillum Lindl. (s.) 500. no. 14.
— quinquevulnerum Lindl. ° 899. no. 10.
— radicosum A. Rich. (s.) 884. no. 6. †
— roseum Lodd. (s.) 896. no. 1. †
— rostratum Roxb. (s.) VI. 881.
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— subulatum Lindl. (s.) 500. no. 19.
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— canina L. var.
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(conf. Licania Aubl.)
— splendens Korth. ° IV, 648, no. 1.
Angelica? rosaefolia Hook. ic. (s.) V. 72. no. 5. †
— spuria Ag. (s.) 73. no. 1.
Angelina divergentifolia Pohl (s.) IV. 100. 42.
Angianthearum generum conspectus diagnosticus (A. gr.) ° V. 261.
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— lanceolata Cav. 825. no. 1.
var. β. hispida A. Cunn. °
var. γ. angustifolia A. Gray. °
Angrecum Rchb. fil. 904.
— apiculatum Hook. (s.) 904. no. 4. †
— aphyllum Thouars, Hook. 907. no. 16.
— arachnopus Rchb. fil. ° 905. no. 6.
— arcuatum Lindl. (s.) 907. no. 1. †
— armeniacum Lindl. ° 905. no. 8.
— Aschantense Lindl. (s.) 908. no. 5.
— bicaudatum Lindl. ° 905. no. 7.
— bilobum Lindl. 904. ° no. 4. †
— Brongniartianum Rchb. 904. no. 3.
— campyloplectron Rchb. fil. ° 905. no. 5.
— Capense L. O. (s.) 900. no. 5.
Angrecum caudatum Lindl. (s.) 907. no. 2. †
— clandestinum Lindl. ° 906. no. 13.
— conchiferum Lindl. ° 906. no. 10.
— crumenatum Rumph (s.) VI. 291. no. 62.
— distichum Lindl. (s.) 901. no. 13.
— eburneum Th. 904. no. 2.
— eburneum Lindl. Bot. Reg. et Mag. (s.) 904. no. 1. †
— fasciola Lindl. bot. Reg. (s.) 902. n. 17.
— fragrans Thouars (s.) 899. no. 1.
— funale Lindl. (s.) 902. no. 16.
— furvum Rumph. (s.) 865. no. 3. †
— gladiifolium Th.; Lindl. (s.) 900. n. 2. †
— Lindenii Lindl. (s.) 902. no. 14.
— micranthum Lindl. (s.) 901. no. 8.
— monodon Lindl. (s.) 908. no. 4.
— nervosum Rumph. herb. Amb. (s.) VI. 234. no. 42. †
— ornithorhynchum Lindl. bot. Reg. (s.) 903. no. 18.
— pectinatum Th. Hook. (s.) 900. no. 6. †
— pellucidum Lindl. (s.) 908. no. 3.
— pertusum Lindl. (s.) 908. no. 6.
— Pescatorianum Lindl. (s.) 909. no. 6. var.
— polystachium Lindl. (s.) 901. no. 7.
— pusillum Lindl. ° 906. no. 12.
— sacciferum Lindl. ° 906. no. 11.
— Schiedei Rchb. fil. (s.) 901. no. 11.
— subulatum Lindl. (s.) 909. no. 8.
— superbum Th. 904. no. 1.
— tenue Lindl. ° 906. no. 14.
— vesicatum Lindl. ° 905. no. 9.
— virens Lindl. (s.) 904. no. 2. †.
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— Clawesii Lindl. ° 599. no. 2.
— grandiflora H. B. K. (s.) 587. no. 15.
— Hernandezii Kunth. (Syn.) 587. no. 13.
— Ruckeri Lindl. 600. no. 3. †
var. sanguinea Rchb.
var. Wageneri Regel †
— squalida Endl. Pöpp. (s.) 612. no. 1. †
— superba H. B. K. (s.) 609. no. 1. †
— uniflora R. et P. ° VI. 599. no. 1. †
— virginalis Gard. chr. (s.) 599. n. 1.
Anguria Linn. IV. 855.
Anguriae specierum conspectus Schlchtdl. 855. et p. 856.
— aculeolata Schlchtd. ° 860. no. 24.
— affinis Schlchtd. ° 857. no. 8.
— Arrabidae Schlchtd. ° 859. no. 19.
— ? bignoniacea Pöpp. et Endl. (Schlchtd.) 862. no. 36.
— ? capitata Poepp. et Endl. (Schlchtd.) ° 858. no. 6.

Anguria cissoides Benth. (Schlchtd.)° 859. no. 18.
— dentata Schlchtd. ° 857. no. 10.
— eriantha Poepp. et Endl. (Schlchtd.) ° 858. no. 13.
— Gaudichaudiana Schlchtd. ° 860. n. 25.
— Guianensis Klotzsch (Schlchtd.) ° 858. no. 12.
— heterophylla Willd. mss. (Schlchtd.) ° 859. no. 23.
— Jacquiniana Schlchtd. ° 856. no. 1.
— integrifolia N. et Mart. (Schlchtd.)° 861. no. 31.
— Kegeliana Schlchtd. ° 859. no. 22.
— Kunthiana Schlchtd. ° 861. no. 29.
— laciniosa Schlchtd. ° 862. no. 35.
— leptantha Schlchtd. ° 860. no. 28. var. brevipes Schlchtd.
— Makoyana Lem. (Schlchtd.) ° 858. n. 14.
— Meyeriana Schlchtd.° 860. no. 26.
— ? obtusiloba Schlchtd. ° 862. no. 34.
— Ottoniana Schlchtd. ° 856. no. 4.
— ? multiflora Miq. (Schlchtd.)° 861. no. 32.
— pedata Jacq. excl. syn. (s.) 857. no. 10. †
— ? pedisecta N. et Mart. (Schlchtd.) ° 862. no. 38.
— Plumeriana Schlchtd. ° 856. no. 2.
— polyphyllos Schlchtd. ° 857. no. 9.
— rhizantha Poepp. et Endl. (Schlchtd.) ° 861. no. 30.
— rosea H. B. K. ° 856. no. 3.
— Schomburgkiana Schlchtd. ° 860. no. 27.
— Sellowiana Schlchtd. ° 859. no. 20.
— sinuata Benth. (Schlchtd.) ° 858. no. 17.
— speciosa Schlchtd. ° 858. no. 11.
— spinulosa Poepp. et Endl. (Schlchtd.) ° 858. no. 15.
— subumbellata Miq. (Schlchtd.)° 861. no. 33.
— ternata Roem. (Schlchtd.) ° 857. no. 7.
— trifoliata L. (Schlchtd.) ° 857. no. 6.
— trifoliata Velloso (s.) 857. no. 7.
— triphylla Miq. (Schlchtd.) ° 862. no. 37.
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— Wageneriana Schlchtd. ° 859. no. 21.
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— geniculata Hook. fil. ° 72. no. 6.
— intermedia Hook. fil. ° 71. no. 2.
— Lyallii Hook. fil. ° 71. no. 1.
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— pentachista A. Gray ° 310. no. 1.
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— humilis Spruce ° IV. 56. no. 3.
— reticulata L. ° IV. 56. no. 2.
— sessiliflora Benth. IV. 56. no. 4.
— squamosa L. ° IV. 56. no. 1.
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Anthemis Halmifolia Munby ° 240. no. 5.
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— maritima L. 241. †
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— montana L. 241. †
— mucronulata Bert. 241. †
— Neilreichii Ortm. ° 240. no. 3.
— nobilis L. 240. †
— peregrina 241. †
— piscinalis Munby ° (s.) 240. no. 7.
— rigescens W. 241. †.
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— secundiramea Bip. 241. †
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Anthistiria L. (Ands.) ° 1055. no. 1.
— Abyssinica Hochst. (s.) 1063. no. 1.
— anathera Nees (s.) 1062. no. 3.
— argentea Nees (Ands.) ° 1057. no. 6.
— arguens Willd. (Ands.) ° 1056. no. 4.
α. hispida °
β. glabriuscula °
γ. japonica °
— arguta Nees (s.) 1063. no. 3.
— arundinacea Roxb. (Ands.)° 1059. no. 15.
var. effusa °
var. contracta ° subsericans Nees °
— australis R. Br. (Ands.) ° 1058. no. 10.
var. colorata °
var. concolor °
var. pubescens °
— Bladhii Wight (s.) 1062. no. 2.
— brachyantha Boiss. ° 1060. no. 17.
— caespitosa Ands. ° 1058. no. 9.
— ciliata Retz (Ands.) ° 1057. no. 5.
var. hispida °
var. ciliata °
var. mallicoma ° forma Natalensis °
var. mallicoma ° forma hortensis °
— cimicina Edgew. (s.) 1062. no. 1.
— cuspidata Ands. ° 1058. no. 11.
— Cymbaria Roxb. (Ands.) ° 1059. no. 14.
Anthistiria depauperata Ands. ° 1059. no. 13.
— Desfontainii Knth. (s.) 1058. no. 7.
— glandulosa Wight (s.) 1062. no. 2.
— glauca Desf. (Ands.) ° 1057. no. 7.
— imberbis Desf. (s.) VI. 1058. no. 7.
— Junghuhniana Nees (Ands.)° 1055. no. 1.
var. minor °
var. altior. °
— laxa (Ands.) ° 1059. no. 12.
— Linneana Steud.? (s.) 1062. no. 1.
— polystachya Roxb. (s.) 1056. no. 4.
— prostrata Willd (s.) 1062. no. 1.
— puberula Anders. ° 1058. no. 8.
— punctataHochst.; Rich. (Ands.)°1056. n. 2.
— scandens Roxb. 1056. (Ands.) no. 3.
var. hispida. °
var. subimberbis.
— subglabra Büse ° 1061. no. 19.
— subsericans Nees (s.) 1059. no. 15. var.
— Syriaca Boiss. ° 1060. no. 8.
— villosa Lam. (s.) 1062. no. 2. γ.
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— genistoides Miers ° 593. no. 7. †
— glabella Miers ° 593. no. 4.
— gracilis Benth. 593. no. 5. †
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— Carrenianum Parl. (s.) 942. no. 2.
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— Puellii Lec. et Lam. ° 942. no. 3.
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— cerefolium Vis. (s.) 78. no. 1. var. β.
— cerefolium β. trichospermum DC. pr. (s.) 78. no. 2.

Anthriscus fumarioides Spr. Vis. 78. no. 1. var. β latiloba °
— Sicula Fl. Dalm. (s.) 78. no. 1. var. β.
— trichosperma Schult. (Vis. fl. Dalm. 78. no. 2. †
Anthurium L. V. 898.
— acuminatum Schott ° 908. no. 34.
— albo-costatum Miq. ° 900. no. 10.
— Augustinum Koch et Lauche ° 905. no. 25.
— Beyrichianum Kth. (Koch.) ° 902. no. 15.
— Boucheanum C. Koch ° 905. no. 26.
— breviscapum Knth. (s.) 909. no. 39.
— cardiophyllum Koch et Augustin ° 901. no. 13.
— consobrinum Schott ° 908. no. 35.
— cordatum Koch et Sello ° 898. no. 2.
— cordifolium alatum Mathieu (s.) 887. n. 24.
— costatum Koch et Bouché ° 899. no. 3. (cf. 909. no. 39.)
— cucullatum Koch et Sello ° 899. no. 4.
— elatum C. Koch et B. ° 898. n. 1. et 906. no. 29. (cf. 909. no. 38.)
— ellipticum Koch et B. ° 899. no. 5. et 904. no. 22.
— erubescens Lindl. Cat. (s.) 887. no. 25.
— erythropodum Miq. ° 900. no. 9.
— Friedrichsthalii Schott. ° 907. no. 32.
— Galeottii Koch ° 903. no. 19.
— glaucescens Knth. (Koch.) ° 904. no. 21.
— Harrisii Hort. non Endl. (s.) 901. no. 14.
— Hookeri Knth. (Koch.) ° 904. no. 23.
— Hügelii Schott (s.) 904. no. 23.
— Humboldtianum hort. belg. (s.) 901. no. 13.
— Humboldtianum Knth. 909. no. 39 cf. 899. no. 3. et 908. no. 37.
— Kunthii Poepp. (Schott.) ° 909. no. 38. cf. 899. no. 3.
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— Miquelianum Koch et Aug. 902. no. 18.
— neglectum hort. Amst. (s.) 904. no. 24.
— Nymphaefolium Koch et B. ° 899. no. 6.
— ochranthum C. Koch ° 900. no. 7.
— Pachiraefolium Schott ° 909. no. 40.
— panduratum Mart. (Schott) ° 909 no. 41.
— polyrrhizum Koch et Aug. ° 906. no. 27.
— radicans Koch et Haage ° 902. no. 16.
— Rudgeanum Schott ° 907. no. 33.
— Selloum C. Koch ° 906. no. 28.
— signatum Koch et Matthieu ° 907. no. 3.
— Smilaciforme C. Koch ° 907. no. 31.
— striatum Koch et Matthieu ° 905. no. 24.
— Surinamense Miq. ° 901. no. 12.
— undulatum Koch et B. ° 901. no. 14.
— varians Miq. ° 901. no. 11.
— violascens Schott ° 908. no. 37. (cf. 909. no. 39.)
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— Guyanensis Planch. (s.) VI. 12. no. 2.
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— Lindleyana R. W. ° (s.) 463. no. 4.
— montana Lindl. 463. no. 9.
— senilis Lindl. (s.) 463. no. 10.
— Smithiana Lindl. (s.) VI. 462. no. 3.
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— Porteana Morel ° 656. no. 2. †
— squarrosa Nees 657.
var. citrina †
var. Leopoldi v. Houtte †
— tetragona Nees 657.
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— Fucoides Tul. 781. no. 5.
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— ? Preissii Tul. ° 781. no. 11.
— Psyllophora Tul. 781. no. 1.
— pusilla Tul. 781. no. 7.
— pygmaea Tul. 781. no. 8.
— Riedelii Tul. 781. no. 6. †
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— decumbens β. tenellum Banks et Sol. ms. (s.) 65. no. 1. β.
— filiforme A. Rich. (Hook.) ° 65. no. 2. †
var. α. Hook. °
var. β. Hook. °
— fractophyllum Hornem (Hassk.) ° 65. n. 3.
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— glauca Schreb. (s.) 1064. no. 2.
— humilis Presl. (s.) 1065. no. 4. α
— microstachya Nees (s.) 1064. no. 2.
— mucronata Steud. (s.) 1065. no. 4. β
— mutica L. (Ands.) ° 1065. no. 4. †
α. humilis Ands. °
β. mucronata Ands. °
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— micranthum W. Griff. (s.) 279. no. 1.
— sinuatum Lindl. (s.) 280. no. 6.
Appendicula Bl. 893.
— bifaria Lindl. ° 893. no. 2.
Appendicula Hasseltii Bl. (s.) 893. no. 1.
— Lewisii Griff. ° 893. no. 3.
— membranacea Tijsm. et Bin. 894. no. 5.
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— vulgaris L. (Hook. et Th.) IV. 25. no. 2.
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var. β. viscosa Hook. et Th. ° IV. 25. l. c. (cf. l. c. syn.)
var. γ. pubiflora H. et Th. ° IV. 25. l. c. (cf. l. c. syn.)
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— fasciculifolius Boiss. 523. no. 168. †
— Fendleri A. Gr. 524. no. 4.
— filagineus Boiss. 499. no. 10. †
— Fischeri Buhse ° 516. no 120. †
— flavescens Boiss. 513. no. 104.
— floccosus Boiss. 500. no. 17.
— Forskahlii Boiss. 522. no. 163. †
— Genargenteus Moris (s.) 514. no. 108.
— genistoides Boiss. 513. no. 101.
— Ghilanicus F. ° 498. no. 7. †
— glaucacanthos F. ° 523. no. 170. †
— globuliflorus Boiss. 506. no. 63.
— glumaceus Boiss. 490. no. 144.
— gossypinus F. ° 506. no. 58. †
— Grahamianus Royle 512. no. 93. †
— gummifer Labill. 502. no. 31. †
— gymnolobus F. ° 515. no. 117. †
— Hasbeyanus Boiss. 504. no. 50.
— Hermoneus Boiss. 514. no. 112. †
— Hohenackeri Boiss. 520. no. 148. †
— horridus Boiss. 513. no. 105. †
— horridus hb. Willd. (s.) 499. no. 8.
— humistratus A. Gr. ° 524. no. 3.
— hymenocystis F. et Mey. ° 519. no. 140. †
— hymenostegis F. et Mey. ° 519. no. 139. †
— hystrix F. et Mey. ° 511. no. 90. †
— infestus Boiss. 513. no. 99.
— iodotropis Boiss. 521. no. 157.
— jubatus Boiss. 523. no. 172.
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— Kapherrianus F. ° 518. no. 136. †
— Kentrodes Buhse ° 513. no. 103.
— Khirgisicus Stegl. ° 527. no. 19.
— Kurdicus Boiss. 507. no. 67. †
— lagonyx F. ° 504. no. 49. †
— lagopoides Lam. 517. no. 132. †
— lagopoides β. persicus DC. C. A. Mey. (s.) 517. no. 134.

Astragalus lagurus Willd. 517. no. 133. +
— Lamarkii Boiss. 505. no. 54. +
— lasiosemius Boiss. 513. no. 100. +
— lasiostylis F. ° 505. no. 52. +
— laxiflorus F. ° 508. no. 76. +
— leiocladus Boiss. 501. no. 26.
— lepidanthus Boiss. 509. no. 77.
— leptacanthus Buhse ° 516. no. 124. +
— leptodendron F. ° 501. no. 28. +
— leucanthus Boiss. 513. no. 102.
— leucophyllus Willd. (s.) 514. no. 114.
— Lindheimeri Engelm. (A. Gr.) ° 525. n. 7.
— longifolius Lam. 504. no. 51. +
— longifolius Willd. (s.) 504. no. 47.
— lycioides Boiss. 516. no. 123.
— Lydius F. ° 509. no. 80. +
— macrosemius Boiss. 513. no. 106. +
— malacotrichus Kotschy. (s.) 501. no. 29.
— Marschallianus F. ° 498. no. 6. +
— Massiliensis Lam. 514. no. 109. +
— Massiliensis Ph. Thomas (s.) 514. no. 108.
— mesoleios Boiss. et Hoh. 501. no. 24.
— mesopotamicus 519. no. 137.
— Meyeri Boiss. 504. no. 46. +
— Michauxianus Boiss. 504. no. 44. +
— microcephalus Willd. 498. no. 4.
— micropterus F. ° 519. no. 83. +
— microphysa Boiss. 521. no. 158. +
— Mitchellianus Boiss. no. 506. no. 62.
— mucronifolius Boiss. 516. no. 119. +
— Mülleri Steud. et Hochst. (Vis.) ° 526. no. 15. +
— multiceps Wall. Royle 513. no. 98.
— murinus Boiss. 521. no. 154. +
— myriacanthus Boiss. 499. no. 14. +
— Nevadensis Boiss. 503. no. 41. +
— ochrolorus Boiss. 503. no. 37. +
— oleifolius DC. 504. no. 47. +
— oligophyllus Schrenk 514. no. 111. +
— olympicus Lam. (s.) 514. no. 114.
— Oroboides Horn. variet. pallidiflora Stschegl. 527. no. 21.
— ovigerus Boiss. 524. no. 174.
— Parnassi Boiss. 506. no. 61.
— Persicus F. et Mey ° 517. no. 134. +
— Persicus Oliv. (s.) 502. no. 33.
— Pickeringii A. Gr. ° 526. no. 11.
— plumosus Willd. 508. no. 70. +
— polyacanthos Royle 513. no. 97.
— porphyrorhaphis Fisch. ° 520. no. 152. +
— porphyrolepis F. ° 507. no. 65. +
— Prusianus Boiss. 504. no. 45. +
— pseudo oxaplus F. ° 501. no. 30. +
— pseudotragacantha Pall. (s.) 502. no. 35.
— psilacanthus Boiss. 518. no. 95. +
Astragalus psilacentrus F. ° 512. no. 92. +
— psilodontius Boiss. 508. no. 72.
— ptilodus Boiss. 507. no. 64.
— ptychophyllus Boiss. 520. no. 150. +
— pungens Friw. (s.) 514. no. 114.
— pungens Willd. 515. no. 116. +
— pycnocephalos F. ° 505. no. 56. +
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— recognitus F. ° 519. no. 142. +
— remotiflorus Boiss. 521. no. 155.
— retusus Willd. (s.) 514. no. 114.
— Richii A. Gr. ° 525. no. 10.
— Roussaeanus Boiss. 501. no. 29. +
— Russelii Boiss. no. 166. +
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— Schirasicus F. ° 520. no. 146. +
— sciurus Boiss. 520. no. 143. +
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— sericostachyus Stocks ° 527. no. 20.
— Siculus Rafin. 503. no. 42. +
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— stenolepis F. ° 508. no. 73. +
— stenorhachis F. ° 508. no. 74. +
(an andrachnifolii var.?)
— strictifolius Boiss. 506. no. 59. +
— strobiliferus Royle 501. no. 22. +
— submitis Boiss. et Hoh. 521. no. 160. +
— Susianus Boiss. 516. no. 125. +
— Szovitzii F. et Mey. ° 522. no. 162. +
— Tabrizianus Buhse ° 518. no. 135. +
— Talagonicus Boiss. 499. no. 12.
— Tanaiticus C. Koch. ° 527. no. 18.
— Tephrodes A. Gr. ° 525. no. 6.
— Thracicus Griseb. ° 511. no. 87. +
— Tmoleus Boiss. 511. no. 86. +
— Tokatensis F. ° 505. no. 55. +
— tortuosus DC. 521. no. 156. +
— Tournefortii Boiss. 501. no. 25.
— Transoxanus F. ° 500. no. 16. +
— trachyacanthus F. ° 507. no. 68. +
— tricholobus DC. 520. no. 147. +
— Trojanus hb. Steven (Fisch.) ° 511. no. 88. +
— tumidus β. armatus DC. (s.) 522. no. 165.
— Thurberi A. Gray ° 525. no. 8.
— tymphresteus Boiss. 514. no. 113.
— vaccarum A. Gr ° 524. no. 2.
— Vegliensis Sadl. (s.) 526. no. 15.
— verus Oliv. 502. no. 33. +
— vestitus Boiss. 517. no. 128. +
— virgatus Rchb. non Pall. (s.) 526. no. 15.
— Wiedemannus F. ° 510. no. 82. +

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— neglecta C. Koch et B. ° 64.
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— alba hort. (s.) 327. no. 2.
— viscosa Sweet (s.) IV. 827. no. 2. (secundum Hooker = Dombeya Ameliae Guill.)
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— aculeatum Meyer 822. no. 345.
— Ayri Mart. 822. no. 343. †
— campestre Mart. 822. no. 854. †
— Chonta Mart. 822. no. 342. †
— Guianense Splitg. 822. no. 352.
— gynacanthum Mart. 822. no. 344. †
— Huaimi Mart. 822. no. 350. †
— Jauari Mart. 822. no. 351. †
— Malybo Karst. ° 860. no. 2.
— Mexicanum Liebm. 822. no. 347.
— Munbaca Mart. 822. no. 846.
— Murumuru Mart. 822. no. 341. †
— Paramaca Mart. 822. no. 355. †
— rostratum Hook. fil. ° 820. no. 1. †
— Tucuma Mart. 822. no. 349. †
— vulgare Mart. 822. no. 348. †
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— splendens Planch. ° 458. no. 1. †
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— Forsterii Naud. ° 797. no. 1.
— fraterna A. Gray ° 809. no. 1. †
— intermedia Bl. 797. no. 5.
— macrophylla Bl. (Naud.) ° 797. no. 2.
— papetaria Bl. 797. no. 3.
— Pickeringii A. Gray ° 809. no. 2. †
var. α. Samoensis A. Gr. °
var β. Vitiensis A. Gray °
— spectabilis Bl. 797. no. 4.
— ? subcordata A. Gray ° 810. no. 4.
Astronidium A. Gray ° 810.
— parviflorum A. Gray ° 810. no. 1. †
Astronieae (Melastomacear. subordo) Naud. ° IV. 797.
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— Chelonoides Nees (Benth.) ° 650. no. 1.
— crispata Benth. ° 650. no. 2.
— Lawiana Dalz. ° 650. no. 3.
Ataccia Presl VI. 149.
— cristata Hook. ° 149. no. 1. †
Atalantia monophylla Benth. (s.) IV. 355. n. 3.
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— emarginata Miers ° IV. 225. no. 1.
Athamantha ramosissima Portenschl. (s.) V. 70. no. 1.
— flavescens Vis. h. Pad. (s.) 70. no. 1.
— verticillata Port. (s.) 70. no. 1.
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— micranthum Tul. ° IV. 117. no. 2. †
— moschatum Labill. ° IV. 117. no. 1. †
Athrisia Ericaefolia DC. (s.) V. 171.
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— cancellata L. V. 354. no. 1. †
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— amblyostegia Turcz. ° 728. no. 1.
— lasiantha Boiss. ° 728. no. 3.
— leucoclada Boiss. ° 728. no. 2.
— Palaestina Boiss. ° 729. no. 5.
— Persica Boiss. ° 729. no. 4.
Atrixia australis Steetz (s.) V. 200. no. 1.
Atropa L. V. 571.
— acuminata Royle 571. no. 1. †
— arborea Willd. (s.) 571.
— aristata Poir. (s.) 571.
— contorta Pers. (s.) 571.
— erecta Hornem. (s.) 571.
— flexuosa Willd. (s.) 571.
— frutescens Plum. (s.) 571.
— frutescens Willd. (s.) 571.
— hirtella Sp. (s.) 571.
— Mandragora L. (s.) 571.
— Mandragora Sibth. (s.) 571.
— Origanifolia Desf. (s.) 571.
— punctata L. (s.) 571.
— revoluta Dietr. (s.) 571.
— sideroxyloides Willd. (s.) 571.
— Solanacea L. (s.) 571.
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— compta Mart. 824. no. 392. †
— excelsa Mart. 824. no. 393. †
(Cfr. Scheelea excelsa Karst. 853. n. 3.)
— funifera Mart. 824. no. 395. †
— ? gomphococca Mart. ° 825. no. 403. †
— humilis Mart. 824. no. 391. †
— Maracaibensis Mart. 825. no. 404. †
— Maripa Mart. 825. no. 400. †
— microcarpa Mart. 825. no. 405. †

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— phalerata Mart. 825. no. 399. †
— princeps Mart. 824. no. 396. †
(Cfr. Scheelea princeps Karst. 855. n. 5.)
— speciosa Mart. 824. no. 394.
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— venatorum Mart. ° 825. no. 407.
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Augustia Klotzsch ° IV. 908. †
— Caffra Kl. ° 909. no. 2.
— Dregei Kl. ° 908. no. 1.
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var. β. rubro-nervis Kl. °
— Natalensis Kl. ° 909. no. 3.
— suffruticosa Kl. ° 909. no. 4.
Augustinea Karst. ° V. 846.
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— albinervis Boiss. ° 1000. no. 14.
— barbata Brot. (s.) 1000. no. 11.
— brevis Roth ° 998. no. 4.
— bromoides Gouan 1000. no. 13.
α. genuina Wk. °
β. microstachya Wk. °
γ. straminea Lge. °
— Cantabrica Lag. (s.) 1001. no. 16. α.
— Carmeli Boiss. ° 1001. no. 20.
— clauda Dur. 999. no. 10. † et 1002. †
var. eriantha °
— convoluta Presl (s.) 1001. 16. α.
— eriantha Dur. ° 999. no. 8. † et 1002. †
— fallax R. S. (s.) 1001. no. 17.
— fatua L. ° 1000. no. 12.
var. glabrescens °
— filifolia Lag. 1001. no. 16.
α. glabra Boiss. °
β. velutina Boiss. °
— hirsuta Roth ° 1000. no. 11.
— hirtula Lag. (s.) 1000. no. 11.
α. genuina Willk. β. triflora Willk.
— hispanica Lge. (s.) 1003. no. 1.
— hydrophila F. Müll. (s.) 1003. no. 3.
— Jungbuhnii Böse ° 1002. no. 25.
— longiglumis Dur. ° 999. no. 9. † et 1002. †
— Ludoviciana Dur. ° 1001. no. 15.
Avena macrostachya Bal. ° 1002. no. 22.
— montana Vill. (s.) 1001. no. 17.
— Neumayeriana Vis. ° 1001. no. 18.
— nuda L. ° 999. no. 5.
— orientalis Schreb. ° 998. no. 2.
— paupercula Phil. ° 1002. no. 23.
— pubescens L. var. diantha Heuff. ° 1001. no. 19.
— sativa L. ° 998. no. 1.
— scabrivalvis Trin. 1002. no. 24.
— Sedenensis DC. 1001. no. 17.
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β. teretifolia Wk. °
— sempervirens Lap. (s.) 1001. no. 17.
— splendens Boiss. el. (s.) 1000. no. 14.
— sterilis L. ° 999. no. 7.
— strigosa Schreb. ° 998. no. 3.
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— lanceolata Rz. et Pav. (s.) 784. no. 7.
— ? muricata Don. 785. no. 2.
— ? purpurea Rz. et Pav. 785. no. 1.
— ? radula Benth. 785. no. 3.
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— elegans Brongn. ° (s.) 374. no. 220. var. β. ° +
— elegans Knw. et Westcott (s.) 374. n. 220. +
— Lindleyana Batem. (s.) 375. no. 222. +
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— dichotoma Roxb. 653.
— discolor Nees (s.) 640. no. 3.
— elata Oerst. ° 652. no. 1.
— grandis Hochst. (s.) 653.
— (Pseudobarleria Oers. °) hirsuta Nees (s.) 653.
— Hochstetteri Nees (s.) 654. +
— laciniata Nees 653.
— longiflora L. (s.) 653.
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— micans Nees (s.) V. 640. no. 2.
— Nepalensis Nees (s.) 653.
— noctiflora L. (s.) 654.
— obtusa Nees (s.) 654.
— polystachya Hook. (s.) 653.
— polytricha Wall. (s.) 653.
— Prionitis L. (s.) 654.
— pubiflora Benth. 654. no. 2.
— Richardiana Nees (s.) 653.
— solanifolia L. (s.) 653.
— spina-Ceylanica Nees (s.) 654.
— spinicyma Nees (s.) 654.
— stimulans E. Mey. (s.) 654.
Barleriacanthus Oerst. V. 654.
Barleriacanthus noctiflora Oerst. 654.
Barleriola Oerst. ° V. 653.
— Solanifolia Oerst. 653.
Barleriopsis Oerd. V. 639.
— discolor Oerst. 640. no. 3.
— glandulosa Oerd. 640. no. 1.
— micans Oerd. 640. no. 2. var. brachystachya.
Barleriosiphon Oerst. ° V. 653.
— longiflora Oerst. 653.
Barlerites Oerst. ° V. 654.
— Hochstetteri Oerst. 654.
— obtusa Oerst. 654.
Barnardia Lindl. VI. 117.
— Indica R. W. 117. +
Barosma Willd. IV. p. 412.
— betulina Bartl. ° 412. no. 1.
— crenata Berg. ° 413. no. 2.
α. var. ovalis Berg et Schmidt ° 413. no. 2. α. +
β. var obovata Berg et Schmidt ° 413. no. 2. β.
— crenata Ecklon et Zeyher. (s.) 413. n. 3.
— crenata Rich., Kunze, Kumm. (s.) 413. no. 2. α.
— crenulata Hook. (Berg et Schmidt °) 413. no. 4. +
var. α. latifolia Berg ° 413. n. 4. α +
var. β. longifolia Berg ° 413. n. 4. β
var. γ. angustifolia Berg ° 413. n. 4 γ
— crenulata Hook bot. mag. (s.) 413. n. 4. γ +
— Eckloniana Berg ° 413. no. 3.
— odoratum Willd. (s.) 413. no. 4. β +
Barringtonia Forst. IV. 850.
— acutangula Spanoghe (s.) 850. no. 3.
— acutangula Bl. Bidr. (s.) 851. no. 5.
— acutangula Korth. haud Gaertn. (s.) 851. no. 11.
— costatum Miq. ° ° 851. no. 8. +
— elongata Korth. (s.) 850. no. 2.
— excelsa Bl. (Miq.) ° 852. no. 14.
— Horsfieldii Miq. ° 851. no. 10.
— insignis Miq. ° 850. no. 5. +
— macrocarpa Hassk. (Miq.) ° 850. no. 2.
— ? macrophylla Miq. ° 852. no. 16.
— nitida Miq. 851. no. 13.
— racemosa hort. (non auct.) (s.) 851. no. 5.
— Reinwardtii Miq. ° 851. no. 7.
— reticulata Miq. 851. no. 11.
— rubra Bl. 850. no. 4.
— Samoensis A. Gr. ° 852. no. 17. var. β. A. Gr. °
— sarcostachys Miq. 851. no. 12.
— serrata Miq. ° 851. no. 6.

Barringtonia speciosa L. 850. no. 1.
— spicata Bl. 851. no. 9. †
— Timorensis Bl. (Miq.) ° 850. no. 3.
— Vriesei Teysm. et Binnend. (Miq.°) 852. no. 15.
Barringtonieae DC. IV. 850.
Bartlettia A. Gray ° V. 209.
— scaposa A. Gr. ° 209. no. 1.
Barya Klotzsch ° IV. 876. †
— monadelpha Kl. ° 876. no. 1.
Baryosma odorata Roem. et Sch. IV. 413. no. 4. β
Bucco betulina Roem. et Sch. 413. no. 2. β
— crenata Roem. et Sch. IV. 413 no. 2. α
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— elliptica Dalz. ° 475. no. 1.
— latifolia Roxb. ° 476. no. 2.
Batemania Lindl. ° VI. p. 554.
— Beaumontii Rchb. (Walp. Ann. III. p. 514.) 555. no. 5.
— Colleyi Lindl. ° 554. no. 1.
— fimbriata Lind., Rchb. ° 554. no. 2.
— grandiflora Rchb. ° 555. no. 3.
— meleagris Rchb. ° 555. no. 4.
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Batschia Thunb. IV. 135.
— conferta Thunb. ° IV. 135. no. 1.
Bauhinia Linn. (Miq.) ° IV. 602.
— acida Reinw. sp. Korth (s.) 607. no. 1.
— acuminata L. Miq. 602. no. 1.
— acuminata L. (s.) 602. no. 1.
— ampla Spanoghe 608. no. 5. (num species distincta ?)
— bidentata Jack. (s.) 604. no. 9.
— bracteata Wall. Cat. (s.) 606. no. 23.
— Buchanani Desv. (s.) 606. no. 26.
— candida DC. (s.) 602. no. 1.
— castrata Hassk. Fl. (s.) 607. no. 1.
— coccinea DC. pr. (s.) 605. no. 20.
— Coromandeliana DC. (s.) 603. no. 1.
— corymbosa Roxb. (s.) 606. no. 22.
— cucullata Zoll. (s.) 602. no. 2.
— diphylla Zoll. haud Symes (s.) 606. n. 25.
— diphylla Symes (s.) 606. no. 26.
— emarginata Jack non Roxb. (s.) 603. no. 5.
— eximia Miq. ° 602. no. 8.
— ferruginea Korth., Miq. (s.) 604. no. 6.
— fulva Bl. (s.) 605. no. 16.
— hirsuta Korth. 602. no. 4.
— integrifolia Roxb. (s.) 604. no. 12.
— Kockiana Korth. (s.) 604. no. 11.
— lucida Wall. Cat. (s.) 603. no. 5.
Bauhinia mollissima Wall. Cat. (s.) 60[illegible] no. 3.
— parviflora Seem. ° 603. no. 6.
— pinnata Blanco (s.) 606. no. 27.
— purpurea DC. pr. pr. p. (s.) 607. no. 1.
— purpurea Zoll. et Mor. (s.) 603. no. 1.
— pyrrhaneura Korth. (s.) 604. no. 7. †
— retusa DC. (s.) 604. no. 10.
— speciosa Roxb. in Wall. Cat. (s) 60[illegible] no. 2.
— speciosa Rheede h. Malab. (s.) 60[illegible] n. 2. †
— tenuis Spanoghe (s.) 607. no. 2.
— Timeriana Decaisne (s.) no. 2.
— tomentosa Lin., Miq. 602. no. 2.
— triandra Roxb. (s.) 603. no. 1.
— xanthoneura Korth. (s.) 604. no. 7.
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— multiflora Teysm. et. Bin. ° 497. no. 1.
Bechsteineria Regel ° V. 468. †
— allogophylla Regel 468.
Beckera Fresen. ° VI. 936.
— polystachya Fig. et Not. ° 936. no. 1 †
Beckeropsis Fig. et Not. ° VI. 959.
— Nubica Hochst. 959. no. 1. †
— petiolaris Hochst. 959. no. 2.
Befaria Mutis V. 458.
— aestuans DC. pr. 458. no. 1. †
Begonia Plum. L. (Klotzsch) ° IV. 876.
— aculeata Walp. (s.) 892. no. 2.
— acuminata Dryand. (Kl.) ° 877. no. 1.
— acutiloba Liebm. (s.) 889. no. 9.
— acutifolia Jacq. (Kl.) ° 877. no. 2.
— aequata A. Gray ° 941. no. 11.
— albo-coccinea Hook. (s.) 905. no. 1. †
— angularis Raddi (s.) 878. no. 5.
— argentea v. Houtte (s.) 891. no. 2.
— argyrostigma Fisch. ° 891. no. 1.
— asarifolia Liebm. (s.) 917. no. 28.
— Aucubaefolia hort. (s.) 867. no. 1.
— auriformis hort. Berol. (s.) = Rachia aurif. 883.
— Balmisiana Ruiz (s.) 890. no. 14.
— Barkeri Knowles et Westc. (s.) 91[illegible] no. 24.
— biserrata Lindl. (s.) 889. no. 7.
— bombycina Bl. (s.) 904. no. 5.
— Bowringiana Champ. ° 909. no. 1.
— Brasiliensis Klotzsch. ° 881. no. 21.
— bulbifera (s.) 890. no. 11.
— Caffra Meisn. (s.) 909. no. 2.
— cardiocarpa Liebm. (s.) 912. no. 10.
— carolinaefolia Reg. (s.) 914. no. 16. †
— carpinifolia Liebm. (s.) = Gireoudia carpinifol. Kl. p. 913.

Begonia Cathcartii Hook. fil. et Th. (s.) 933. no. 4. †
— ciliata H. B. K. (Kl. °) 879. no. 10.
— coccinea h. Ruizii (s.) 934. no. 1. et 3.
— coccinea Hook. (s.) 923. no. 2. †
— columnaris Benth. (s.) 938. no. 2.
— columnaris herb. Ruiz. (s.) 934. no. 2.
— conchaefolia Dietr. (s.) 917. no. 26.
— coriacea Hassk. (s.) 905. no. 2.
— crassicaulis Lindl. (s.) 912. no. 5. †
— cucullata Willd. 878. no. 7.
— Cumingii A. Gray ° 941. no. 12.
— cyathophora Poepp. et Endl. (s.) 919. no. 1. †
— dealbata Liebm. (s.) = Knesebeckia dealbata Kl. 884.
— dichotoma Jacq. (s.) 927. no. 8. †
— digitata Raddi (s.) 898. no. 4.
— dipetala Grah. (s.) 921. no. 1. †
— discolor R. Br. (s.) 888. no. 4.
— disticha Link (s.) 878. no. 5.
— disticha hort. Berol. (s.) 878. no. 4.
— diversifolia Grah. (s.) 890. no. 12.
— Dregei Otto et Dietr. (s.) 909. no. 1.
— echinata Royle (s.) = Reichenheimia echinata Kl. 884.
— elata Klotzsch ° 882. no. 25.
— elegans H. B. K. (s.) = Casparya elegans Kl. 884.
— Ermani Klotzsch ° 882. no. 27.
— erosa Bl. (s.) 929. no. 2.
— Evansiana Andr. (s.) 888. no. 4.
— fagifolia Fischer (s.) 925. no. 2.
— fagopyroides Kunth et Bouché (s.) 907. no. 1.
— falciloba Liebm. (s.) 889. no. 10.
— fasciculata W. Jack. (s.) 906. no. 2.
— ferruginea Linn. fil.; Dryand. (s.) 936. no. 2.
— filipes Benth. (Liebm.) ° 941. no. 10.
— fimbriata Liebm. (s.) 913. no. 12
— Fischeri Otto et Dietr.; Grah. (s.) 923. no. 1.
— foliosa Poepp. herbar. (s.) 900. no. 3.
— foliosa Humb. B. K. (s.) 899. no. 1.
— Franconis Liebm. (Klotzsch) ° 883. n. 29. et 941. no. 8.
— Fuchsioides Hook. (s.) 922. n. 1. †
— fusca Liebm. (s.) 920. no. 1.
— Galeottii hort. Berol. (s.) 884. no. 2.
— Gaudichaudii Walp. (s.) 875. no. 1.
— gemmipara Hook. fil. et Th. (s.) 937. no. 1. †
— geniculata Jack (s.) 905. no. 4.
Begonia Geraniifolia Hook. (s.) 875. no. 8.
— glabra Aubl.; Lam. (s.) 926. no. 5.
— glabra herb. Ruizii (s.) 939. no. 3 et 884. (non cucullata).
— glauca herb. Ruizii (s.) 923 no. 4.
— Grahamiana R. Wight (s.) 905. no. 2. †
— Hamiltoniana Liebm. (s.) 877. no. 1.
— Hasskarlii Zoll. (s.) 905. no. 2.
— Heracleifolia Cham. et Schl. (s.) 916. no. 22.
— Heracleifolia Hook.; Lindl. (s.) 916. no 22. α.
— Hernandiaefolia h. Berol. (s.) 917. n. 27.
— Hernandiaefolia Hook. (s.) 905. no. 2. †
— heterophylla hort. Schoenbr. (s.) 890. no. 12. et 884.
— hirsuta h. Ruizii (s.) = Pilderia hirsuta Kl. 884.
— hirtella Lk. (Klotzsch) ° 879. n. 12.
— Hügelii hort. Berol. (s.) 928. no. 12.
— humilis bot. Reg. (s) 878. no. 4.
— humilis Dryand. (s.) 888. no. 31.
— Hydrocotylifolia Grah. (s.) 917. no. 28. et 884.
— ignea Warszew. in litt. (s.) 889. no. 8.
— incana Lindl. (s.) 909. no. 2.
— incarnata Lk. et Otto (s.) 887. no. 2.
— Ingramii (hybr.) 942. †
— insignis Grah. (s.) 887. no. 2.
— integrifolia Dalz. ° 939. no. 2.
— involucrata Liebm. (s.) 911. no. 1.
— Jatrophaefolia h. Berol. (s.) = Gireoudia Kl. 884.
— Kunthiana Walp. (s.) 892. no. 4.
— lepidota Liebm. (s.) = Gireoudia manicata var. p. 885. et 915. no. 21.
— libonica hort. Berol. (s.) 924. no. 7.
— Lindleyana Walp. (s.) 912. no. 6.
— lobata Schott (s.) 894. no. 4.
— longipes Hook. bot. mag. (s.) 927. no. 9. †
— longirostris Benth. (s.)
— lucida ° Kth. et Bouché (s.) 892. no. 4.
— lucida Otto et Dietr. (s.) 926. no. 8.
— luxurians Scheidw. (s.) 898. no. 3.
— macrophylla Dryand. (s.) 916. no. 23.
— macrophylla hort. Berol. (s.) 916. n. 23. α
— macroptera Klotzsch ° 881. no. 24.
— maculata Raddi (s.) 901. no. 1.
— magnifica Lind. (s.) 935. no. 1.
— magnifica Wrscwz. (s.) 935. no. 1.
— Malabarica Dryand. (s.) 904. no. 3.
— malvacea Klotzch ° 881. no. 21.
— manicata Cels. (s.) 915. no. 21.

Begonia Martiana Link, (s.) 890. no. 12.
— maxima hort. Berol. (s.) 920. no. 2.
— Meyeri Hook. (s.) 909. no. 3.
— Meyeri Otto et Dietr. (s.) 898. no. 3.
— microphylla herb. Willd. (s.) 899. n. 1.
— miniata Planch. (s.) 922. no. 2. †
— modesta Liebm. (Kl.) ° 883. no. 30. et 940 no. 7.
— monadelpha herb. Ruizii 876. no. 1.
— monoptera Lk. et Otto (s.) 890. no. 13.
— Moritzia Klotzsch ° 880. no. 16.
— Moritziana Knth. et Bouché (s.) 926. no. 3.
— multangula Blume (s.) 929. no. 1.
— multinervia Liebm. (s.) = Gireoudia multinerv. Kl. 885.
— muricata Scheidw. (s.) 898. no. 2.
— Natalensis Hook. (s.) 909. no. 3. †
— Nelumbifolia Cham. et Schl. (s.) 917. no. 27.
— nervosa Desf. ms. (syn.) 879. no. 2.
— nitida Dryand. (Kl.) ° 878. no. 2.
— octopetala Lher. (s.) 874. no. 1.
— obliqua herb. Ruizii (s.) 919. no. 1.
— obliqua Lherit. stirp. no. 246, non L. (Kl.) ° 877. no. 2. α
— obliqua Lherit. stirp. p. 95. (s.) 877. no. 3.
— obliqua Linné (s.) 877. no. 1.
— odorata Willd. (Kl.) ° 878. no. 6.
— Oregana hort. (s.) = Pritzelia ramentacea Kl. 885.
— Ottonis Walp. (s.) 908. no. 2.
— papillosa Grah. (s.) 888. no. 3.
— parviflora Klotzsch ° 881. no. 22.
— parviflora Poepp. et Endl. (s.) 898. n. 1.
— parviflora Grah.; E. Mey. (s.) 909. n. 1. †
— patula Haw. (Kl.) ° 879. no. 13.
— pauciflora Lindl. bot. reg. (s.) 879. n. 13.
— pedata Liebm. (s) 888. no. 5.
— peltata Hassk. (s.) 905 no. 2.
— peltata Otto et Dietr. (s.) 903. no. 1.
— pentaphylla Walp. (s.) 898. no. 2.
— peponifolia h. Berol. (s.) 916. n. 23. β
— petalodes Lindl. (s.) 875. no. 1.
— physalifolia Liebm. (s.) = Gireoudia physalifolia Kl. ° 855.
— plebeja Liebm. 917. no. 25.
— Pohliana Klotzsch ° 881. no. 20.
— polygonata Liebm. 940. no. 5.
— populifolia H. B. K. (s.) ° 890. no. 14.
— Porteriana F. et Mey. (Kl. °) 882. n. 28.
— Prestoniensis (hybr.) 942. †
— princeps hort. (s.) 924. no. 7.

Begonia pulchella Raddi (s.) 901. no. 2.
— pustulata Liebm. (s.) 904. no. 2.
— racemosa W. Jack. (s.) 908. no. 1.
— ramentacea Paxt. (s.) 924. no. 6. †
— reniformis Hook. bot. mag.? (s) 925. no. 7. †
— reniformis Dryand. (s.) 927. no. 10. †
— reniformis h. Berol. (s.) 908. no. 1.
— repanda Bl. (s.) 904. no. 4.
— repens h. Ruizii (s.) 918. no. 1.
— reptans Benth. (s.) 931. no. 1.
— rhizocaulis h. Berol. (s.) 916. no. 23.
— rhizocarpa Fisch. (s.) 910. no. 1.
— rigida h. Turic. (s.) 896. no. 2.
— rotata Liebm. ° 940. no. 4. et 914. n. 15
— rubricaulis Hook. (s.) 874. no. 2.
— robusta Bl. (s.) 930. no. 3.
— rubro-venia Hook. (s.) 932. no. 2. †
— rugosa h. Schoenbr. (s.) 926. no. 6.
— rutilans v. Houtte (s.) 898. no. 1.
— sanguinea Raddi; Link et Otto; Hook. (s.) 923. no. 3. †
— sarcophylla Liebm. (s.) 913. no. 9.
— Sartorii Liebm. ° 940. no. 6.
— scandens h. Berol. et Schoenbr. (s.) 925. no. 1. et 926. no. 6.
— schizolepis Liebm. (s.) 915. no. 21.
— scutellata Liebm. (s.) 917. no. 26. α
— Sellowii Klotzsch ° 879. no. 9.
— semperflorens Link et Otto (s.) 879. no. 8. et 942. †
— sericoneura Liebm. (s.) 913. no. 11.
— setaria h. Anglic. (s.) 879. no. 9.
— setosa Klotzsch ° 880. no. 17.
— setulosa Bertero (s.) 914. no. 14.
— sinuata E. Mey.; Grah. (s.) 909. no. 2 non Wall.
— spatulata Haw. (s.) 879. no. 7.
— speciosa h. Berol. (s.) 877. no. 2 α
— splendida Rollins. (s.) 930. no. 3.
— squarrosa Liebm. (s.) 914. no. 13.
— stigmosa Lindl. (s.) 915. no. 20.
— stipulacea Willd. (Kl.) ° 878. no. 5.
— strigillosa Dietr. pp. (s.) 915. no. 19.
— suaveolens Haw. (Kl.) ° 878. no. 4.
— subpeltata R. Wight (s.) 904. no. 2.
— subvillosa Klotzsch ° 880. no. 18.
— suffruticosa Meisn. (s.) 909. no. 4.
— sulcata Scheidw. (s.) 886. no. 1.
— Thwaitesii Hook. (s.) 904. no. 1.
— tomentosa hort. (s.) = Wageneria tomentosa Kl. 886.
— tomentosa Schott (s.) 896. no. 1.
— Tovarensis Klotzsch ° 880. no. 15.

Begonia trachyptera Benth. (s.) 936. no. 1.
— trichocarpa Dalz ° 939. no. 8.
— tuberosa h. Ruizii (s.) 876. no. 4.
— uliginosa Schott (Kl.) ° 882. no. 26.
— ulmifolia H. B. K. (s.) 908. no. 1. †
— umbellata H. B. K. (s.) 937. no. 1.
— uncinata (non sinuata) h. Berol. (s.) 909. no. 2.
— undulata Schott (s.) 882. no. 8.
— urophylla W. Hook. (s.) 914. no. 17.
— urticae L. F. (s.) 938. no. 1.
— urticaefolia h. Berol. (s.) 892. no. 1.
— urticaefolia Dryand. (s.) 938. no. 1.
— vellerea Klotzsch ° 881. no. 19.
— velutina h. Berol. (s.) = Knesebeckia Balmisiana Kl. 886.
— velutina L. h. Vindob. (s.) 894. no. 2.
— vernicosa L. Berol. (s.) 893. no. 1,
— Verschaffeltii Reg. (hybr.) (s.) 942. †
— verticillata Hook. (s.) 932. no. 1.
— villosa Lindl. (Kl.) ° 870. no. 11.
— vitifolia Lindl. (s.) 912. no. 6.
— vitifolia Schott (s.) 927. no. 7.
— Wallichiana Steud. (s.) 900. no. 1.
— Xanthina Hook. (s.) 933. no. 1. †
— Zebrina hort. Angl. (s.) 924. no. 5.
— incertae sedis IV. 939—942.
BEGONIACEAE R. Br. (Klotzsch) ° IV. 868.
BEGONIACEARUM conspectus Klotzsch ° IV. 869—874.
Begonieae Klotzsch ° IV. 869.
Belantheria Belvisiana Nees V. 647. no. 1.
— Lamium Benth. (s.) 647. no. 1.
— Vogelianum Benth. (s.) 647. no. 1.
Bellevalia Lap. VI. 112.
— dubia Rchb. (s.) VI. 112. no. 3.
— flexuosa Boiss. VI. 112. no. 2.
— macrobotrys Boiss. ° VI. 112. no. 1.
— Webbiana Parl. ° VI. 112. no. 3.
Bellidiastrum Mich. V. 172.
— Michelii Cass. 172. no. 1. †
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— annua L. 186. †
— dentata DC. (s.) 186. (sub annua).
— grifolia Bks. et Sol. ms. ic. (s.) 188. n. 1.
— Mexicana A. Gr. ° 186. no. 1.
— perennis L. 186. †
— pilosa Banks et Sol. ms. ic. (s.) 188. no. 4.
— ramosa Lam. (s.) 186. (sub annua).
— repens Lam. (s.) 186. (sub annua).
— silvestris Cyr. 187. †
Bellium bellidiodes Desf. (s.) cf. Bellis annua.
— dentatum Vis. fr. (s.) cf. Bellis annua. VI.
Bellucia Naud. ° IV. 701.
— Aubletii Naud. ° 701. no. 1.
— Brasiliensis Naud. ° 702. no. 4.
— Hostmanni Naud. ° 702. no. 2.
— pentamera Naud. ° 702. no. 5.
— superba Naud. ° 702. no. 3.
Belotia Ach. Rich. (s.) IV. 331.
Beloperonides Oerd. ° V. 642. †
— macrantha Oerd. ° 642. no. 1.
Belowia Moq. V. 736.
— baccifera Moq. (Bge.) ° 736. no. 2.
— paradoxa Bunge ° 736. no. 1.
Benitzia Karst. ° VI. 41.
— Poeppigiana Karst. ° 41. no. 2.
— suaveolens Karst. ° 41. no. 1.
Benthamia Lindl. V. 90.
— fragifera Lindl. 90. no. 1. †
Bentinckia Berry V. 812.
— Coddapanna Berry 812. no. 137. †
— Renda Mart. 812. no. 538.
BERBERIDEAE Vent. IV. 142.
Berberis L. IV. 142.
— acanthifolia Wall. (s.) 142. no. 1.
— Aetnensis Presl.; Moris (s.) 143. n. 7. γ
— affinis Don. (s.) 144. no. 9. β
— angulosa Wall. (Hook. et Th.) ° 147. n. 16.
— angustifolia Roxb. (s.) 144. no. 9. α
— aristata DC. (H. et Th.) ° 144. no. 9.
α normalis H. et Th. °
β floribunda H. et Th. °
γ micrantha H. et Th. °
— aristata Bot. M. (s.) 145. no. 10. †
— Asiatica Roxb. ° 145. no. 11.
— atroviridis Wall. C. (s) 146. no. 13. α
— Bealii Hook. ° 148. no. 4.
var. planifolia Hook. °
— brachybotrys Edgew. (s.) 144. no. 7. δ
— Canadensis Gn. O. et H. 148. no. 20.
— Canadensis Mill. (s.) 143. no. 7. β
— ceratophylla Don (s.) 145. no. 9. β
— Chitria Ker et Don (s.) 145. no. 9. α †
— Chococo Schlchtd. ° 148. no. 2.
— concinna Hook. ° 147. no. 18. †
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— cinnabarina Lind. Lindl. (s.) 770. n. 116. l.
— cinnamomea Lind. (s.) 769. no. 116. m.
— Clowesii Lindl. (s.) VI. 764. no. 5.
— cochleata Kn. et Westc. (s.) 766. no. 116. c †
— coryandra Morren (s.) 769. no. 116. k
— Cowani hort. (s.) 769. no. 116. k.
— Gireoudiana Rchb. fil. (s.) 768. n. 116. h.
— glumacea Lindl. (s.) 769. no. 116. m.
— guttata Lindl. (s.) 765. no. 116. a. †
— hexodonta Rchb. fil. ° (s.) 767. n. 116. g.
— imbricata Lindl. (s.) 769. no. 116. e.
— Josstiana Rchb. fil. in Reg. (s.) 998 suppl. †
— Keiliana Rchb. fil. (s.) 770. no. 116. l.
— Lanceana Lindl. (s.) 765. no. 116. b. †
— Lawrenceana Lindl. (s.) 765. n. 116. c. †
— longiloba DC. (s.) 769. no. 116. k. †
— macrostachya Lindl. (s.) 765. n. 116. b. †
— maculata R. Br. (s.) 765. no. 116. a. †
— Ocanensis Lindl. (s.) 769. no. 116. m.
— ?odontoglossoides Klotzsch (s.) 768 no. 116. k.
— Peruviana Poepp.; Lindl. (s.) 766 no. 116. e †
— pumila Linden (s.) 765. no. 116. b. †
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— Wageneri Rchb. fil. (s.) 767. no. 116. f.
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— confertiflora Benth. (s.) 597.
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— Hopeana Benth. (s.) 597.
— Hydrangaeformis Benth. (s.) 597.
— latifolia Benth. (s.) 597.
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— maritima Benth. (s.) 597.
— obovata Benth. (s.) 597.
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— ferox Hassk. (s.) 589. no. 3.
— gracilis Miq. ° 589. no. 5.
— inermis Roxb. ° 590. no. 10.
— Macklotii ? Zoll. vix Zipp. (s.) 592. n. 6.
— nitida Hassk. ° 590. no. 11.
— Nuga Ait. ° 588. no. 1.
— pulcherrima Benth. (Miq.) 589. no. 7.
— Sappan Linn. 588. no. 2.
— sepiaria Roxb. 589. no. 3.
— ? spicata Dalz ° (Wagatea spicata Dalz.) 590. no. 12. et 588. no. 1.
— Sumatrana Roxb. (s.) 591. no. 5.
— tortuosa Roxb. ° (s.) 589. no. 4.
— vernalis Champ. (Benth.) ° 590. no. 9.
CAESALPINIEAE R. Br. IV. 588.
Caillieacallistachys (non callystachys Hassk.) (s.) IV. 615. no. 1.
Caladium Vent. V. 876.
— aculeatum Mey. (s.) 882. no. 1.
— appendiculatum hort. (s.) 881. no. 13.
— ? argyrostigma Schott ° (s.) 877. no. 4.
— asperulum Schott ° 877. no. 8.
— cupreum K. et Bouché ° 877. no. 7.
Caladium firmulum Schott ° 878. no. 10.
— fragrantissimum Hassk. (s.) 890. n. 35.
— grandifolium Sims. (s.) 890. no. 33.
— Haworthii hort. nonnull. (s.) 876. n. 11.
— Humboldtii Schott ° 878. no. 9.
— macrorrhizon hort. (s.) 874. no. 3.
— macrotites Schott ° 878. no. 11.
— marginatum K. et Bouché. 877. no. 5.
— marmoratum L. Mathieu (Koch) ° 877. n. 4.
— metallicum hort. (s.) 876. no. 8.
— pallidum Koch et Bouché ° 876. no. 3.
— picturatum Koch et Bouché ° 877. n. 6.
— rugosum Desf. (s.) 276. no. 11.
— sagittifolium var. violacea Lam. (s.) 879. no. 3.
— Simsii Hook. (s.) 890. no. 33.
— smaragdinum Koch et Bouché ° 876. n. 2.
— Surinamense Miq. ° 876. no. 1.
Calamagrostis Adans. VI. 985.
— chilensis Phil. ° 985. no. 1.
— densiflora Blytt ° (s.) 986. no. 4. var.
— dubia Bunge ° 988. no. 12.
— elata Blytt ° 986. no. 7. et 987. no. 9.
— glaucescens Blytt ° (s.) 986. no. 4. var.
— glomerata Boiss. et Buhse ° 987. n. 11.
— gracilescens Blytt ° 985. no. 3.
— Halleriana DC. 985. no. 4.
— Hartmanniana Fr. 987. no. 10. †
— Langdorfii Fr. (?) (s.) 986. no. 5.
— laxior Blytt ° (s.) 987. no. 10.
— nutans Saut. (Blytt) ° 986. no. 6.
— pollida Blytt ° (s.) 986. no. 4. var.
— pallidiflora Blytt ° (s.) 986. no. 7.
— pseudo-Phragmites Lk. (s.) 985. n. 4.
— pulchella (Saut.) Blytt ° 987. no. 8.
— robusta Blytt ° (s.) 985. no. 4.
— rubella Boiss. (s.) 977. no. 1.
— rubicunda Blytt ° 986. no. 5.
— strigosa Hartm. 985. no. 2.
— variflora Blytt ° (s.) 986. no. 4. var.
Calamina gigantea P. B. (s.) VI. 1065. n. 4.
— mutica P. B. (s.) VI. 1065. no. 4.
Calamintha Mönch V. 673.
— Fenzlii Vis. 674. no. 8.
— florida Boiss. ° 673. no. 3.

Calamintha glomerulosa B. et Heldr. (s.) 673. n. 1. α
— incana B. et Heldr. ° 674. no. 5.
— Origanifolia Boiss. ° 643. no. 1.
var. α velutina B. et Heldr. °
— Pamphylica B. et Heldr. 674. no. 4.
— Patavina var. acuminata Benth. exp. non Griseb. (s.) 674. no. 7.
— Spruneri Boiss. ° 674. no. 6.
— staminea Boiss. 673. no. 2.
— suaveolens Boiss. ° 674. no. 7.
Calamus L. V. 829. 856.
— acanthospathus Griff. 830. no. 481. †
— adspersus Bl. 832. no. 530.
— albus Pers. 832. no. 543.
— ? amarus Lour. 832. no. 550.
— arborescens Griff. 829. no. 473.
— asperrimus Bl. 832. no. 536.
— aureus Reinw. 832. no. 538.
— ? australis Mart. 832. no. 540.
— Blancoi Bl. Mart. 832. no. 552.
— brevifrons Mart. 831. no. 512.
— Buroensis Mart. 830. no. 498.
— caesius Bl. 832. no. 533.
— calolepis Miq. ° 856. no. 1.
— Caryotoides All. Cunn. 831. no. 517.
— castaneus Griff. 829. no. 469. †
— Cawa Bl. 832. no. 547.
— ciliaris Bl. 830. no. 487.
— collinus Griff. 829. no. 471. †
— concinnus Mart. 829. no. 476. †
— discolor Mart. 832. no. 539.
— epetiolaris Mart. 830. no. 498.
— equestris Willd. 832. no. 532.
— erectus Roxb. 829. no. 474.
— exilis Griff. 830. no. 485.
— extensus Roxb. 831. no. 519.
— fasciculatus Roxb. 831. no. 514. †
— flagellum Griff. 830. no. 482. †
— floribundus Griff. 831. no. 506. †
— geminiflorus 831. no. 518. †
— glaucescens Bl. 831. no. 523.
— gracilis Roxb. 831. no. 518.
— graminosus Bl. 832. no. 546.
— Griffithianus Mart. 829. no. 470. †
— Haenkeanus Mart. 831. no. 511.
— Heliotropum Ham. 830. no. 490.
— heteroideus Bl. 830. no. 496.
— horrens Bl. 830. no. 480.
— Huegelianus Mart. 831. no. 516. †
— humilis Roxb. 829. no. 475.
— Javensis Bl. Rumph. 831. no. 508.
— insignis Griff. 831. no. 515.
— laevigatus Mart. 831. no. 522.
— ? latifolius Roxb. 831. no. 526. †
Calamus leptospadix Griff. 830. no. 484. †
— longisetus Griff. 830. no. 478.
— macrocarpus Griff. 830. no. 483. †
— marginatus Mart. 832. no. 545.
— ? maximus Blanco 832. no 551.
— melanacanthus Mart. 830. no. 484. †
— melanoloma Mart. 831. no. 524. †
— Metzianus Schlchtd. ° 856. no. 2.
— micranthus Griff. 831. no. 521.
— micranthus Bl. 831. no. 508. †
— Mishmeensis Griff. 831. no. 510.
— mollis Blanco 831. no. 502.
— monoicus Roxb. 830. no. 499.
— nitidus Mart. 830. no. 491.
— opacus Bl. 830. no. 501.
— ornatus Bl. 830. no. 477. †
— pallens Bl. 832. no. 535.
— palustris Griff. 831. no. 527. †
— penicillatus Mart. 830. no. 486.
— ? petraeus Lour. 832. no. 549.
— pisicarpus Bl. 832. no. 531.
— plicatus Bl. 831. no. 525.
— polygamus Roxb. 831. no. 507.
— quinquenervius Roxb. 831. no. 520.
— Reinwardtii Mart. 830. no. 495. †
— rhomboideus Bl. 832. no. 534.
— Rotang L. 830. no. 488. †
— Royleanus Griff. 830. no. 492. †
— rudentum Lour. 831. no. 528.
— schistocanthos Bl. 830. no. 500.
— schizospathus Griff. 829. no. 472.
— ? scipionum Lour. 832. no. 548.
— secundiflorus Pal. Beauv. 832. no. 537.
— siphonispathus Mart. 832. no. 544.
— spectabilis Bl. Rumph. 831. no. 505. †
— symphysipus Mart. 831. no. 504. †
— tenuis Roxb. 830. no. 493. †
— tetrastichus Bl. 431. no. 509.
— usitatus Blanco 831. no. 529.
— verus Lour. 832. no. 541.
Calandrinia H. B. K. V. 7.
— biflora Mey. 7. no. 1.
var. glandulosa A. Gr. °
— Gayana Barneoud. (s.) 7. no. 1.
— Pickeringii A. Gr. ° 7. no. 1.
Calanthe R. Br. 910.
(Specierum analysis) 910.
— abbreviata Lindl. ° VI. p. 913. no. 7.
— alismaefolia Lindl. ° 918. no. 26.
— alpina J. D. Hook. ° 913. no. 8.
— angusta Lindl. 916. no. 20.
— angustifolia Lindl. ° 914. no. 11.
— bicolor Lindl. (s.) 919. no. 28. †
— biloba Lindl. ° 912. no. 5.
— brevicornu Lindl. ° 912. no. 4. †

Calanthe chloroleuca Lindl. ° 920. no. 34.
— clavata Lindl. 914. no. 12.
— comosa Rchb. fil. (s.) 918. no. 24. d.
— conspicua Lindl. ° 913. no. 9.
— curculigioides Lindl. ° 913. no. 10. †
— densiflora Lindl. ° 919. no. 31. †
— discolor Lindl. ° 919. no. 27. †
— emarginata Lindl. 914. no. 14. †
— fulgens Lindl. ° 921. no. 35.
— furcata Batem. ° 916. no. 21.
— galeata Lindl. ° 914. no. 13.
— gracilis Lindl. (s.) 922. no. 3.
— gracillima Lindl. ° 918. no. 25.
— Griffithii Lindl. ° 919. no. 29.
— herbacea Lindl. ° 920. no. 38. †
— Masuca Lindl. ° 915. no. 16. †
— mexicana Rchb. fil. ° 912. no. 6. †
— occidentalis Lindl. ° 912. no. 3.
— ?odora Griff. ° 921. no. 36.
— parviflora Lindl. ° 916. no. 19. †
— Perottetii A. Rich. 917. no. 23. †
— plantaginea Lindl. ° 920. no. 32. †
— puberula Lindl. ° 912. no. 2.
— ?pulcra L. O. (s.) 913. no. 10.
— purpurea Lindl. ° 915. no. 17. †
— silvatica Lindl. ° 914. no. 15.
— speciosa Lindl. 919. no. 30.
— striata R. Br. ° 919. no. 28. †
— tricarinata Lindl. 912. no. 1.
— uncata Lindl. ° 916. no. 18.
— vaginata Lindl. ° 917. no. 22.
— veratrifolia Hook. (s.) 918. no. 25.
— veratrifolia R. Br. ° 917. no. 24. †
var. discolor.
var. australis.
var. comosa.
— versicolor Lindl. ° (s.) 915. no. 15.
— vestita Lindl. (s.) 920. no. 33. †
— vestita Lindl. Lam. Jord. Fl. (s.) VI. 460. no. 1. †
— viridi-fusca Hook. (s.) VI. 270. u. 13. †
— Whightii Rchb. fil. VI. 914. 932.
Calanthus Oerd. ° V. 411. †
— multiflorus Oerd. 411.
Calathea C. F. W. Mey. VI. 36.
— zebrina Lindl. 36. no. 1. †
Calathodes H. f. et Th. ° IV. 29.
— palmata H. et Th. ° IV. 29. no. 1.
Calceolaria L. 598.
— alba R. et P. 599.
— aquatica A. Br. et Bouché ° 599. no. 3.
— Cheloniodes H. B. K. 599. †
— flexuosa R. et Pav. 599. †
— repens Hook f. ° 598. no. 1.
Calceolaria sparsiflora Kunze ° 598. no. 2.
— stricta H. B. K. 599. †
— tetragona Benth. 599. †
— violacea Cav. 599. †
Calceolariarum varietates 599. †
Caldasia lasiopetala Lag. (s.) V. 79. no. 2.
Calectasia Brown VI. 156.
— grandiflora Preiss. (Sond.)° 157. no. 3.
— intermedia Sond. ° 156. no. 2.
— cyanea R. Br. ° 156. no. 1.
Calectasieae Endl. VI. 156.
CALELYNA Rchb. (Evelynae sectio) ° VI. 473. ad 1.
Calendula Neck. V. 348.
— arvensis L. 348. no. 2. †
— microcephala Kralik (Rchb.) 349. n. 4. †
— officinalis L. 348. no. 1. †
— parviflora Raf. 349. no. 5. †
— sublanata Rchb. ° 348. no. 3. †
Calimeris Cass. V. 174.
— ciliosa Turcz. ° 174. no. 1.
Calla aromatica Roxb. (s.) V. 892. no. 3.
— calyptrata Roxb. (s.) 892. no. 5.
— occulta Lour. (s.) V. 892. no. 1.
— rubescens Roxb. et Wght. ic. (s.) 892. no. 4. †
— virosa Roxb. (s.) 892. no. 2.
Calliandra Benth. IV. 684.
— conferta Benth. ° 684. no. 2.
— haematocephala Hassk. ° 684. no. 4.
— reticulata A. Gr. ° 684. no. 1.
— Santi-Pauli Hassk. ° 685. no. 5.
— Seemanni Benth. ° 684. no. 3. †
Callianthemum C. A. Mey. IV. 16.
— Cachemiricum Camb. (s.) IV. 16. no. 1.
— Endlicheri (Oxygraphis) (s.) IV. 31. n. 1.
— pimpinelloides Hook. et Th. ° IV. 16. no. 1.
Callicarpa L. V. 709.
— cinerea A. Rich. ° 709. no. 2.
— fulva A. Rich. ° 709. no. 1.
— integerrima Champ. ° 709. no. 4.
— tenuiflora Champ. ° 709. no. 3.
Callichroa Douglasii Torr. et Gr. (s.) V. 289. no. 1.
Calliglossa Douglasii Hook. et Arn. (s.) V. 289. no. 1.
Callirhoe involucrata A. Gr. (s.) IV. 298 no. 2.
Callisia Loefl. VI. 159.
Callistemon R. Br. IV. 825.
— teretifolius F. Müll. ° 825. no. 1.
Calluna Salisb. V. 436.
— vulgaris Salisb. var. incana Rchb. ° 436. no. 1. †

Calocephalus Gnaphalioides Hook. (s.) V. 274. no. 1.
CALODENDRON Nutt° (Rhododendri sect.) V. 449.
Calodracon Planch. VI. 198.
— Heliconiaefolius Planch. 189. no. 2.
— Jacquinii Planch.
var. α. atrosanguinea Goepp. ° 138. no. 1. †
var. β. purpureo-variegata Goepp. ° 189. no. 1.
— nobilis Planch. 139. no. 4. †
— Sieboldii Planch. 133. no. 3.
— Sieboldii Planch. (olim) (s.) 139. n. 4. †
Calogyne R. Br. V. 370. 387.
— pilosa R. Br. 387. no. 1.
Calonyction Choisy V. 532.
— megalocarpum A. Rich. 532. no. 1. †
Calopetalon J. Drum. ° IV. 242.
— ringens J. Drum. ° IV. 242. no. 1.
Calophanes Don V. 647.
— Cubensis A. Rich. ° 647. no. 4.
— capitatus Ord. ° 647. no. 3.
— quadrangularis Ord. ° 647. no. 1.
— Schiedeanus Nees
var. multiflorus Ord. ° 647. no. 2.
Calophyllum L. IV. 366.
— edule Seem. ° 367. no. 5.
— excelsum Zoll. (s.) 367. no. 1.
— hirtellum Miq. ° 367. no. 2.
— Javanicum Miq. ° 367. no. 4.
— tetrapterum ° 367. no. 3.
— venulosum Zoll. ° 366. no. 1.
Calophysa DC. IV. 700.
— Tococoidea DC. 700. no. 1.
Calotis R. Br. V. 186.
— cuneifolia R. Br. 186. no. 1.
Calpicarpum G. Don V. 492.
— Roxburghii Don 492. no. 1.
Caltha L. IV. 30.
— alba Jacquem. (s.) IV. 31. no. 9.
— alpestris Schott ° IV. 31. no. 6.
— cornuta Schott ° 30. no. 1.
— Govoniana Wall. IV. 31. no. 9.
— Guerangerii Bor. ° IV. 31. no. 8.
— Himalensis Don (s.) IV. 31. no. 9.
— intermedia Schott ° IV. 30. no. 4.
— laeta Schott ° IV. 30. no. 3.
— latifolia Schott ° IV. 30. no. 2.
— palustris L. IV. 31. no. 9.
— paniculata Wall. (s.) IV. 31. no. 10.
— scaposa H. f. et Th. ° IV. 31. no. 7.
— vulgaris Schott IV. 30. 5.
CALYCANTHEAE Lindl. IV. 671.
Calycanthus Lindl. IV. 671.
Calycanthus occidentalis Hook. et Arn. 671. no. 1. †
CALYCEREAE R. Br. V. 142.
CALYCIFLORAE DC. IV. 425.
Calycogonium DC. IV. 695.
— glabratum DC. (Naud.) ° 695. no. 2.
— heterophyllum Naud. ° 695. no. 5.
— Lindenianum Naud. ° 695. no. 3.
— Rhamnoideum Naud. ° 695. no. 4.
— stellatum DC. (Naud.) ° 695. no. 1.
Calycophyllum DC. (Klotzsch) ° V. 122.
— candidissimum DC. 122. no. 1.
— coccineum DC. pr. (s.) 123. no. 1.
— Stanleyanum R. Schomb. (s.) 122. n. 1.
— tubulosum DC. pr. (s.) 130. no. 2.
Calycoseris A. Gray ° V. 328.
— Wrightii A. Gray ° 328. no. 1. †
Calycostemma Hanst. ° V. 407. †
— grande Hanst. in herb. Vindob. 407.
Calypsoa grandiflora h. Berol. (s.) V. 421. no. 2.
Calyptranthus corymbosa Bl. (s.) IV. 563 no. 10.
— caryophyllifolia Bl. non Willd. (s.) 563. no. 30.
Calyptraria Naud. ° IV. 787. †
— brachycera Naud. 788. no. 4.
— eximia Naud. ° 788. no. 2.
— insignis Naud. ° 788. no. 3.
— Mutisii Naud. 788. no. 1.
Calyptrella Naud. ° IV. 782.
— Galeottii Naud. ° 782. no. 1.
Calyptrocalyx Bl. V. 814.
— spicatus Bl. Rumph. 814. no. 173. †
Calysaccion Wight IV. 367.
— ovalifolium Choisy ° 367. no. 1.
Calystegia R. Br. V. 535.
— Dahurica hort. v. Houtt. (vix auct.) 536. †
— sepium R Br. β. rosea Choisy (Schlchd.)° 535. no. 2.
— sepium var. incarnata 536. †
— Tuguriorum Br. 535. no. 1. †
var. minor Hook. °
Camarotis Lindl. VI. 881.
— obtusa Lindl. ° 881. no. 1.
— rostrata Rchb. fil. ° 881. no. 2.
Camaridium Lindl. ° VI. 541.
— alatum Lindl. ° 541. no. 2.
— arbusculum Lindl. ° 541. no. 3.
— brevifolium Lindl. ° (s.) 540. no. 116.
— graminifolium Rchb. fil.° (s.) 538. n. 109.
— lancifolium Rchb. fil. (s.) 539. no. 112.
— longibracteatum Lindl. (s.) 540. n. 115.
— luteorubrum Lindl. ° (s.) 540. no. 114.

Camaridium ochroleucum Lindl. ° 511. no. 1.
— purpuratum Lindl. ° (s.) VI. 538. n. 107.
— vestitum Lindl. (s.) 491. no. 18.
Camelina Austriaca R. Br. (s.) IV. 200. no. 2.
— Barbaraefolia DC. (s.) IV. 201. no. 1.
— Caisir Wall. Cat. (s.) IV. 200. no. 3.
Camellia L. IV. 351.
— assimilis Champ. ° 351. no. 2.
— Japonica var. Drysdalii 351. †
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— spectabilis Champ. ° 351. no. 3.
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— brachysepala Vukot. 400 no. 30.
— caespitosa Scop. 399. no. 22.
— Carnica Schiede 396. no. 8.
— Carpatica pr. p. (s.) 399. no. 23.
— Cenisia L. 402. †
— cephalaria Vuk. 401. no. 36.
— Cochlearifolia Wender. ° 399. no 25.
— colorata DC. pr.
β. Moorcroftiana Hook. 402. †
— consanguinea Schott ° 397. no. 10.
— dilecta Schott ° 396. no. 9.
— exul Schott ° 397. no. 11.
— Foudrosi Jord. ° 395. no. 4.
— gracilis Jord. ° 394. no. 2.
— grammosepala Vukotinovic ° 400. n 28.
— Hauryi Schott ° 397. no. 15.
— heterophylla Baumg. (s.) 403. no. 1.
— Hochstetteri Schott ° 398. no. 19.
— inconcessa Schott ° 397. no. 14.
— laciniata L. 402. †
— Lehmanniana Bge. ° 399. no. 26.
— macrorhiza Vukot. ° 400. no. 32.
— Malyi Schott ° 398. no. 16.
— Mathoneti Jord. ° 396. no. 7.
— modesta Schott ° 399. no. 21.
— notata Schott ° 398. no. 20.
— oxyphylla Vukot. ° 401. no. 33.
— parvula Jord. ° 395 no. 3.
— pentagonophylla Vukot. 400. no. 29.
— perneglecta Schott ° 398. no. 17.
— Persifolia var. coronata 402. †
— Primulaeflora DC. pr. 402. †
— pulchella Jord. ° 395. no. 6.
— racemosa Vukot. ° 401. no. 34.
— redux Schott ° 397. no. 13.
— rosulata Vukot. 400. no. 31.
— serratifolia Vuk. 402. no. 37.
Campanula strigillosa Boiss. ° 399. no. 24.
— strigosa DC. pr. 402. †
— Styriaca Schott ° 397. no. 12.
— subramulosa Jord. ° 394. no. 1.
— tenella Jord. ° 395. no. 5.
— tomentosa Lam. 402. †
— Trachelioides Munby ° 400. no. 27.
— Transsylvanica pr. p. (s.) 399. no. 23
— turbinata Schott ° 399. no. 23.
— Tyrolensis Schott ° 398. no. 18.
— umbellulifera Vukot. 400. no. 35.
— Vidalii Hook. 402. †
— Wanneri Rochel (s.) 403. no. 1.
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— fastigiata Schlechtd. ° 165. no. 1.
Camphorosma L. V. 729.
— Monspeliaca M. B. (s.) 730. no. 2.
— perennis Pall. (Ledeb.) ° 730. no. 2.
α recurvifolia Ledeb. °
β. stricta Ledeb. °
— perennis Pall. (s.) 730. no. 2. α †
— sp. n. Sischegl. ° 729. no. 1.
Camphusia Vr. ° V. 369 et. 370.
— glabra Vr. ° 371. no. 1.
Campnosperma Thw. ° IV. 444 †
— Zeylanicum Thw. ° 444. no. 1. †
Camptosema Hook. et. Arn. IV. 555. no. 1. †.
— rubicundum Hook. et Arn. 555. no. 1 †
Campylosporus angustifolius Spach (s.) 359. no. 10.
— Madagascariensis Spach (s.) 359. no. 11.
— reticulatus Spach (s.) IV. 359. no. 9.
Campylotropis Bunge. IV 547.
— cytisoides Benth. ° 547. no. 1.
— macrostyla Lindl. 547. no. 3.
— virgata Miq. ° 547. no. 2.
Cananga Rumph. ° IV p. 64.
— odorata H. et. Th. ° IV. 64. no. 1.
Canarium L. IV. 450.
— Vitiense A. Gray. ° 450. no. 1.
var. β. A. Gray °
Canavalia DC. IV. 556.
— galeata Gaud. (A. Gr.) ° 556. no. 1.
var. β. pubescens A. Gr. °
— Gaudichaudii Endl. (s.) 556. no. 1.
— pubescens Hook. et Arn. (s.) 556. no. 1. β.
Cankrienia de Vr. ° V. 461.
— chrysantha de Vr. ° 461. †
Canna L. VI. 36.
— liliiflora Warscew. ° 36. n. 2. †

Canna sanguinea Hort. Germ. (s.) 36. no. 1.
— Warscewiczii Dietr. (Hook.) ° 36. no. 1. +
Cannabineae Endl. V. 743
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— Reuteri Rchb. f. ° 362. no. 48. †
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— rupestris L. 365. no. 70. †
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— Scabiosa L. 361. no. 31. †.
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— Seusana Chaix 360. no. 26. †
— solstitialis L. 365. no. 73. †
— sonchifolia L. 366. no. 83. †
— sordida W. (Rchb.) ° 365. no. 74. †
— sphaerocephala L. 366. no. 85. †
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— stereophylla Bess. 361. no. 35. †
— stricta W. Kit. (s.) 360. no. 23. α.
— Tchihatcheffii Fisch. et Mey. ° 356. no. 4.
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— tuberosa Vis. (s.) 360. no. 24.

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— Hoffmannseggii Reinh. (s.) 497. no. 2.
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— saccata Lindl. ° 495. no. 1.
— tristis Lindl. ° (s.) 496. no. 2.
— violaceus Hoffgg. (s.) 497. no. 2.
— viridipurpurea Lind. (s.) 496. no. 2.
var. Fryana Flor. Cab. (s.) 497. no. 2.
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— caespitosum Wall. (s.) 258. no. 64.
— capitatum Lindl. (s.) 264. no. 82. C.
— carinatum Teysm. et B. (s.) 268. no. 82.
— caudatum Wght. ic. (s.) 261. no. 71.
— Chinensis Lindl. (s.) 260. no. 66.
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— acauli-oleraceum Naeg. (hybr.) 307. no. 57. II. †
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var. caulescens Rchb. †
— altissimum var. Gray pl. Wright. I. (s.) 301. no. 5.
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— arvense Scop. (Wimm. Grab.) ° 304. no. 25. †
a. horridum Wimm. Gr. °
b. mite. W. Gr. °
c. integrifolium W. Gr. ° †
d. vestitum W. Gr. ° †
— bulboso-oleraceum Näg. (hybr.) 306. no. 54. †
— bulboso-palustre Näg. (hybr.) 304. no. 29. †
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c. Anglicum Naeg. †
— bulbosum DC. (s.) 303. no. 22. a.
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— canescens Gray pl. Pendl. (haud Nutt.) 301. no. 4.
(verosimiliter var. Neo-Mexicani.)
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— Chailleti Koch (non Gaud.) 305. no. 34.
— controversum DC. pr. (s.) 306. no. 51.
— decoloratum Koch Syn. (hybr.) (s.) 307. no. 57.
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Cirsium echinatum DC. 302. no. 4. †
— eriophorum Scop. 302. no. 3. †
— Erisithalis Scop. 303. no. 19. †
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— Erisithali-heterophyllum Naeg. (hybr.) 306. no. 46. †
α. Hausmanni Rchb. †
β. Tapeineri Rchb. †
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— erucagineum DC. pr. p. (s.) 307. no. 58.
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— heterophyllo-oleraceum Naeg. (hybr.) 306. no. 56. II. †
— hybridum Koch (hybr.) 305. no. 33. †
— incanum Fisch. (s.) 304. no. 25. c. d.
— Italicum DC. 302. no. 7. †
— lampophyllum Herb. ° 302. no. 8.
— lanceolatum Scop. 302. no. 8. †
— lanceolato-acaule Naeg. (hybr.) 304. no. 27. †
— lanc-palustre Naeg. (hybr.) 304. no. 26. †
— lappaceum M. B.
var. γ. monocephalum Bge. ° 302. no. 1.
— lappoides Sch. Bip. 301. no. 2.
— medium All. (hybr.) 305. no. 39. †
— Monspessulanum All. 303. no. 13. †
— Morisianum Rchb. f. ° 303. no. 6. †
— nemorale Rchb. ° 302. no. 9. †
— Neo-Mexicanum A. Gray. ° 301. no. 4.
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— palustri-heterophyllum Wankel (hybr.) 306. no. 49. †
— palustri-lanceolatum Rchb. fil. (hybr.) 304. no. 26. †
— palustri-oleraceum recedens (hybr.) 305. no. 33. †
— palustri-rivale Naeg. (hybr.) 304. no. 30. †
— Pannonicum Gaud. 303. no. 12. †
— Pannonico-acaule Naeg. (hybr.) 305. no. 35. †
— Pannonico-Erisithalis Naeg. (hybr.) 305. no. 36. †
— pauciflorum Spreng. (syn.) 309. no. 16. †
— platycephalum Benth. ° 301. no. 3.
— praemorsum Mich. (hybr.) 307. no. 55. †
— purpureum All. (hybr.) 306. no. 51. †
α. Antharcticum Rchb. ° †
β. Cervini Rchb. †
— rigens Wallr. (hybr.) (s.) 307. no. 57.
— rivulare Lk. 303. no. 20. †
— rivulari-acaule Naeg. (hybr.) 305. no. 40. †
— rivulari-heterophyllum Naeg. (hybr.) 306. no. 47. †
— rivulari-palustre Naeg. (hybr.) 304. no. 30. †
— rivulari-pauciflorum Rchb. f. (hybr.) 306. no. 45. †
— rivulari-spinosissimum Naeg. (hybr.) 306. no. 50. †
— rufescens DC. pr. (s.) 303. no. 15.
— semidecurrens Richt. (hybr.) 304. no. 28. †
— sessiliflorum Herb. 302. no. 7.
— setosum M. B. (s.) 304. no. 25. α.
— spathulatum Gaud. 302. no. 2. †
— spinosissimum Scop. 303. no. 18. †
— spinosissimo-alpestre Naeg. (s.) 308. n. 51.
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— stellatum All. 304. no. 24. †
— subalpinum Schleich. (hybr.) 305. no. 33. †
— subcoriaceum Sch. Bip. ° 300. no. 1.
— Tataricum Wimm. Grab. (hybr.) 305. no. 37. †
— Thomasii Naeg. (hybr.) 307. no. 59.
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— Wrightii A. Gray ° 301. no. 5.
— Zizanium Koch Syn. (hybr.) (s.) 305. no. 39.
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Cissampelos L. IV. 130.
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— Amazonica Miers ° 131. no. 2.
— assimilis Miers ° 134. no. 3.
— barbata Wall. Cat. (s.) 132. no. 2.
— Caapeba DC. (s.) 130. no. 2.
— Cocculus Poir. (s.) 130. no. 2.
— comata Miers (s.) 130. no. 2.
— convolvulacea Moon (s.) 122. no. 1.
— convolvulacea Willd. (s.) 130. no. 2.
— denudata Miers ° 130. no. 1.
— discolor A. Gr. DC. (s.) 130. no. 2.
— glabra Roxb. (s.) 130. no. 2.
— gracilis St. Hil. (s.) 131. no. 2.
— hernandifolia Willd. (s.) 130. no. 2.
— hexandra Roxb. (s.) 130. no. 2.
— Mauritiana Thouars (s.) 130. no. 2.
— microcarpa DC. (s.) 130. no. 2.
— mucronata Rich. (s.) 130. no. 2.
— nephrophylla Bojer (s.) 131. no. 2.
— obtecta Wall. Cat. (s.) 130. no. 2.
— orbiculata DC. (s.) 130. no. 2.
— ovata Poir. (s.) 133. no. 1.
— Pareira Hook. et Th. ° 130. no. 2.
— Pareirodes DC. ess. med. (s.) 130. n. 2.
— tomentosa DC. (s.) 130. no. 2.
— Vogelii Miers (quoad. pl. masc.) (s.) 130. no. 2.
— Wallichiana Wall. C. (s.) 122. no. 1.
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— acuminata A. Gray ° 391. no. 3.
— discolor Bl. (Planch.) ° 391. no. 4. †
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β. mollis Planch. °
— discolor Bl. Bidr. (s.) 391. no. 4. α.
— discolor Hook. bot. mag. (s.) 391. no. 4. β. †
— hirtella Bl. (s.?) (Vitis) 391. no. 1.
— hypoglauca A. Gray ° 391. no. 2.
— Vitiensis A. Gray ° 391. no. 1.
Cistella cernua Bl. Bijdr. (s.) VI. 632. no. 6 †
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Cistus alpestris Crantz et olim Vis. (s.) IV. 232. no. 5. β.
— anglicus L. (s.) 232. no. 4. ε.
— canus Jacqu. an L.? (s.) 232. n. 4. ε.
— helianthemoides Desf. (s.) 231. n. 3.
— hirtus Host (s.) 232. no. 5. β.
— Oelandicus L. (s.) 231. no. 4. α.
— Oelandicus Jacq. (s.) 232. no. 5. β.
— vinealis W. sp. et Reichenb. (s.) 232. no. 4. ε. †

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— Amazonum Tul. ° 94. no. 16.
— Andina Tul. ° 95. no. 22.
— apicifera Tul. ° 98. no. 37.
— aspiosyce Tul. ° 92. no. 8. †
— aspera Tul. ° 93. no. 10.
— Asperula Tul. (s.) 94. no. 16.
— bifida P. et Endl. (Tul. °) 99. no. 38.
— buddleiaefolia Benth. (Tul.) ° 98. no. 36.
— Brasiliensis Spr. ° 102. no. 51.
— camporum Tul. ° 100. no. 43.
— Chiridota Tul. ° 95. no. 24.
— cristata Tul. ° 101. no. 45.
— Cujubana Tul. ° 91. no. 3.
— cuspidata Tul. ° 101. no. 46.
— decipiens Tul. ° 101. no. 47.
— dentata Poepp. (s.) 99. no. 39.
— dentata Poepp. et Endl. (s.) 94. no. 15.
— dentata Rz. et Pav. ° 103. no. 54.
— discolor Poepp. et Endl. 102. no. 48.
— dubium H. B. K. (s.) 99 no. 40.
— echinata H. B. K. (Tul.) ° 98. no. 35.
— eriocalyx Tul. ° 93. no. 12.
— erythrocarpa Tul. ° 91. no. 1.
— Estrellensis Tul. ° 92. no. 6.
— foliosa Tul. ° 97. no. 29.
— gesnerioides H. B. K. (Tul.) ° 93. n. 13.
— glabra Sprgl. ° 102. no. 52.
— glabrescens Spr. (Tul.) ° 95. no. 21.
— grandiflorum H. B. K. (s.) 96. no. 26.
— Gudotiana Tul. ° 97. no. 31.
— Guianensis Tul. ° 100 no. 42.
var. β. nuda Tul. °
var. δ. divergentifolia Tul. °
— Kunthii Tul. ° 96. no. 26.
— Lagopus Tul. ° 95. no. 23.
— lanceolata Tul. ° 92. no. 5.
— laurifolia H. B. K. (Tul.) ° 97. no. 32.
— lepidota H. B. K. (Tul.) ° 97. no. 29.
— limonidora Tul. ° 94. no. 15.
— limonidora Riv. msc in hb. Paris. (s.) 93 no. 12.
— macrophylla H. B. K. (Tul.) ° 93. n. 14.
— macrophylla Mart. (s.) 101. no. 45.
— molle H. B. K. (s.) 99. no. 40.
— mollicoma Tul. ° 99. no. 39.
— mollis Tul. ° 99. no. 40. †
— muricata R. et P. (Tul.) ° 98. no. 34.
— Mutisii H. B. K. (Tul.) ° 96. no. 27.
— neglecta Tul. ° 94. no. 18.
— oblongifolia R. et P. ° 103. no. 56.
— oligandra Tul. ° 91. no. 2.
— ovalis R. et P. (Tul.) ° 96. no. 28.
— ovalis Spr. (s.) ° 105. no. 6.
Citriosma paniculata Spr. ° 105. no. 61.
— pellita Tul. ° 92. no. 9.
— petiolaris H. B. K. (Tul.) ° 98. no. 33.
— plebeja Tul. ° 91. no. 4.
— Poeppigii Tul. ° 99. no. 41.
— polyantha Tul. ° 93. no. 11.
— pyricarpa Rz. et Pav. 102. no. 53.
— pyricarpa Willd. herb. (s.) 99. no. 41.
— radiata P. et Endl. ° 102. no. 50.
— reginae Tul. ° 101. no. 44.
— riparia Tul. ° 95. no. 20.
— ruficeps Tul. ° 92. no. 7.
— Schottiana Spr. (s.) 105. no. 3.
— Selloi Spr. (s.) 105 no. 5.
— sessiliflora H. B. K. (Tul.) 94. no. 17.
— suaveolens Tul. ° 94. no. 19.
— subinodora Rz. et P. (Tul.) ° 96. n. 25.
— thecaphora Poepp. et Endl. ° 102. n. 49.
— tomentosa Rz. et P. ° 102. no. 55. et 51.
— triflora Spr. (s.) 106. no. 18.
— umbellata Spr. (s.) 109. no. 20.
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— fistulosus J. E. Storks 863. no. 1. †
Clarionea Lag. V. 316.
— Lechleri Sch. Bip. ° 316. no. 1.
— Magellanica DC. 316. no. 1.
Clausena Burm. IV. 356.
— simplicifolia Dalz. ° 356. no. 1.
Clavimyrtus Miq. ° (Jambosae sect.) IV. 845.
Claytonia L. V. 8.
— Alsinoides Sims. 8. †
— lanceolata Hook. et Arn. (s.) 8. no. 1.
— sarmentosa C. A. Mey. 8. no. 1. †
— Virginiana Hook. et Arn.? (s.) 8. no. 1.
CLEIODENDRON Nutt. (Rhododendri sect.) ° V. 495.
Cleisostoma Bl. VI. 888.
— amabile Tijsm. et Binnd. ° 890. no. 11.
— bicolor Lindl. ° 889. no. 6. †
— callosa Bl. ° 890. no. 9.
— crassifolium Lindl. ° 889. no. 8. †
— dealbatum Lindl. (s.) 892. no. 6.
— decipiens Lindl. ° 889. no. 3.
— discolor Lindl. ° 890. no. 10.
— fuscum Lindl. ° 889. no. 5.
— lanatum Lindl. ° 889. no. 7.
— latifolium Lindl. ° 889. no. 4.
— longifolium Tijsm. et B. ° 890. no. 12.
— maculosa Lindl. ° 888. no. 2.
— rosea Lindl. ° 888. no. 1.
— tridentata Lindl. (s.) VI. 900. no. 35.
Cleistanthium Kunze ° V. 310.
— Nepalense Kunze ° 310. no. 1.

Cleistocalyx nervosus Bl. (s.) IV. 840. n. 4.
— nitidus Bl. (s.) 840. no. 4.
Clematideae DC. IV. 3.
Clematis L. IV. 3.
— acuminata DC. ° IV. 7. no. 20.
— acutangula Hook. et Th. IV. 8. no. 23.
— (s.) affinis Wight IV. 5. no. 10.
— (s.) amplexicaulis Edgew. IV. 7. n. 19.
— (s.) anemoniflora Don IV. 8. no. 16.
— aromatica Lenné et Koch. ° IV. 4. n. 4.
— barbellata Edgew. IV. 8. no. 24. †
— Buchaniana DC. ° IV. 7. no. 18.
var. rugosa Hook. et Th. ° IV. 7.
var. tortuosa H. et Th. ° IV. 7.
var. vitifolia H. et Th. ° IV. 7.
— Cadmia Hamilt. ° IV. 8. no. 22.
— connata DC. ° IV. 7. no. 19.
— coriacea Krth. ° IV. 5. no. 8.
— crenata Jord. IV. 3. no. 1.
— cylindrica var. Hendersoni Koch ° (hybr. ?) IV. 4. no. 5.
— fulva Zoll. et Mor. ? Vr. ° IV. 8. no. 27.
— (s.) glandulosa Bl. IV. 5. no. 10.
— (s.) glauca Willd. IV. 6. no. 16.
— Gouriana Roxb. ° IV. 6. no. 14.
— (s.) gracilis Edgew. IV. 7. no. 19.
— grata Wall. ° IV. 6. no. 18.
— (s.) graveolens Lindl. ° IV. 6. ab. 15. Ie. p. 9.
— (s.) graveolens Hook. non Lindl. IV. 6. no. 16.
— grewiaeflora DC. ° IV. 7. no. 17.
— (s.) Hendersoni hort. IV. 4. no. 5.
— (s.) Hyssoidrina Munro. IV. 6. no. 16.
— Javana DC. IV. 5. no. 9.
— Ispahanica Boiss. (s.) IV. 6. no. 16.
— Junghuhniana de Vr. ° IV. 8. no. 2.
— lanuginosa Lindl. ° IV. 7. no. 21. †
— Lechenaultiana DC. var. grosse serrata Miq. ° IV. 5. no. 7.
— montana DC. ° IV. 8. no. 26.
— montana Don (non Mor.) (s.) IV. 8. n. 25.
— Monoroiana Wght. (s.) IV. 5. no. 10.
— Nipalensis DC. ° IV. 8. no. 25.
— Nipalensis Royle (s.) IV. 8. no. 24. †
— orientalis L. var. acutifolia Hook. et Th. ° IV. 6. no. 16.
var. latifolia Hook. et Th. ° IV. 6. n. 16.
var. obtusifolia H. et Th. ° IV. 6. n. 16.
— patens var. monstrosa Planch. ° IV. 9. no. 28. †
var. Amalia IV. 9. no. 28. †
var. Louisa IV. 9. no. 28. †
var. Sophia. IV. 9. no. 28. †
— parviflora Edgew. ° IV. 6. no. 15.
— Punduana Wall. (s.) IV. 8. no. 26.
Clematis reticulata Walt. (s.) IV. 4. no. 6.
— Schillingii C. Koch ° IV. 4.
— smilacifolia Wall. ° IV. 5. no. 10. †
— smilacina Bl. (s.) IV. 5. l. c.
— subpeltata Wall. (s.) IV. 5. l. c.
— sulcata Wall. (s.) IV. 8. no. 22.
— tenuifolia Royle. (s.) IV. 6. no. 16.
— uncinata Champ. IV. 3. no. 3.
— velutina Edgew. (s.) IV. 7. no. 19.
— venosa Royle. (s.) IV. 7. no. 19.
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— Sonorae A. Gray. ° IV. 223. no. 2.
— speciosa H. B. K. (s.) IV. 223.
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— Bakgei Steud. (s.) 711. no. 10.
— Calamitosum L. 711. no. 6.
α. glabriusculum Hassk. °
β. molle Hassk. °
— disparifolium Bl. ° 710. no. 4.
— Eriosiphon Schauer 711. no. 5.
— fallax Lindl. 711. no. 7.
— foetidum Bunge. β. integrifolium. 711. no. 10. †
— infortunatum Lin. 711. no. 8.
— Ixoraeflorum Hassk. ° (s.) 711. n. 10. β.
— Lindenianum Rich. ° 710. no. 1.
— lividum Lindl. 711. no. 12.
— Manetti Vis. ° 710. no. 2.
— pentagonum Hance (s.) 712. no. 12.
— splendens Manetti (non Don) (s.) 710. n. 3.
— squamatum Vahl. 711. no. 11.
α. Japonicum Hassk. °
β. Indicum Hassk. °
— tuberculatum Rich. 710. no. 2.
— villosum Bl. (Hassk.) ° 711. no. 9.
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— aggregata Don 766. no. 61.
— alpestris Gardn. 766. no. 77.
— althaeoides Naud. ° 762. no. 43.
— amblyandra Naud. ° 759. no. 25.

Clidemia amygdaloides DC. 762. no. 44.
— angustifolia Naud. ° 761. no. 34.
— anisophylla DC. 766. no. 81.
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— atrata Spreng. 766. no. 76.
— aurea Cham. 766. no. 75.
— auricoma Naud. 767. no. 90.
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— biseptana DC. (s.) 772. no. 2.
— biserrata DC. (s.) 749. no. 17.
— botryophora Naud. ° 749. no. 20.
— brachystachya DC. 766. no. 64.
— Brackenridgii A. Gr. ° 768. no. 128.
— bracteata DC. (s.) 750. no. 27.
— bullosa DC. (s.?) 749. no. 17.
— capitata Benth. (s.) 777. no. 1.
— capitellata DC. (s.) 749. no. 19.
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— cinnamomifolia Naud. ° 764. no. 53.
— coccinea DC. (s.) 726. no. 109.
— confertiflora DC. 766. no. 62.
— congestiflora Naud. ° 757. no. 10.
— conglomerata DC. (s.) 750. no. 27.
— cordifolia Naud. ° 761. no. 40.
— coriacea Naud. ° 764. no. 54.
— crenata DC. (s.) 746. no. 8.
— cuneata Naud. 766. no. 86.
— dasytricha A. Gray. ° 768. no. 125.
— debilis Naud. ° 762. no. 44.
— dendroides Naud. ° 763. no. 50.
— depauperata DC. 766. no. 82.
— desmantha Benth. (s.) 713. no. 87.
— divaricata Naud. ° 766. no. 60.
— diversifolia DC. (s.) 750. no. 28.
— dolichantha Naud. ° 759. no. 22.
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— euphorbioides Naud. ° 764. no. 54.
— fallax Cham. 766. no. 72.
— floribunda Naud. ° 758. no. 18.
— foveolata DC. 758. no. 16.
— glabrata Steud. (s.) 729. no. 88.
— glomerata DC. 766. no. 70.
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— heterobasis DC. 766. no. 78.
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— intermedia DC. 766. no. 79.
— involucrata DC. (s.) 750. no. 29.
— latifolia DC. (s.) 750. no. 1.
Clidemia leandroides Naud. ° 760. no. 3
— Lima DC. (s.) 775. no. 13.
— lineata Naud. ° 760. no. 30.
— longibarbis DC. 766. no. 68.
— lutescens Naud. ° 758 no. 15.
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— solearis Naud. ° 755. no. 1.
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— montana Don (Naud.) ° 703. no. 7.
— ? parvifolia DC. 704. no. 15.
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— pulverulenta Naud. ° 704. no. 10.
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var. β. vulgaris Benth. °
var. γ. longifolia Benth. °
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— glandulifera Benth. ° 480. no. 1.
— mollis Benth. 480. no. 2.
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var. α. marginata Hook. °
var. β. minor Hook. °
var. γ. major Hook. °
var. δ. robusta Hook. °
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— milleflorum DC. (s.) 741. no. 196.
— papillosum DC. (s.) 734. no. 158.
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— superba Naud. ° 796. no. 1.
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— acuminata Nutt. 328. no. 4. †
— caespitosa Gren. et Godr. 328. no. 2.
— decumbens Gren. et Godr. 328. no. 3.
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— Hyoseridifolia Reich (s.) 332. †
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— acuminata H. B. K. 524. no. 4.
— Cucurbitina L. 524. no. 1.
— Cujete L. 524. no. 3.
— cuneifolia Gard. (s.) 524. no. 3.
— edulis Moz. (s.) 523. no. 2.
— lethifera Tuss. (s.) 524. no. 1. †
— macrophylla Seem. ° 524. no. 2. †
— obovata Benth. (s.) 524. no. 1.
— ovata Burm. (s.) 524. no. 1.
— toxicaria Tuss. (s.) 524. no. 1. †
— trifolia Blanco Fl. Fil. (s.) 524. no. 4.
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— Herbertianus Körn. ° 51. no. 6.
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var. α. et β. °
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var. α. °
var. β. °
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— disticha Zoll. (s.) 460. no. 6.
— epunctata Dalz. ° 461. no. 14.
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— grandiflora Reinw. (Miq.) ° 459. no. 1.
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— Morisii Boreau Fl. centr. Fr. (s.) 356. no. 2.
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Crusea Cham. et Schl. V. 106.
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— tubiflorus Oerd. ° 651. no. 3.
— viscosus Oerd. ° 651. no. 1. †
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— aegyptiaca Tausch ° 988. no. 4. †
— alopecuroides Schrad. β. tenella Boiss. 987. no. 2.
— niliaca Fig. et Not. ° 987. no. 3. †
— pigmaea J. et Spach (s.) 940.
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— lunata R. Br. Rchb. f. ° 698. no. 1. †
— pallidiflora Rchb. f. ° 698. no. 3.
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— glabra Bl. 692. no. 3.
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— pubescens Bl. 692. no. 1.
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— rutifolium Schott ° IV. 190. no. 1.
— verticillare Schott °. IV. 190. no. 2.
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— sanguineus Wall. 461. no. 1. †
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— serpyllifolia Bl. ° 894. no. 1.
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— ammophilus Bge. ° 80. no. 2.
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— pubescens Willd. 864. no. 2.
var. ? β.
var. ? γ.
— triphyllus Plum. (s.) 857. no. 6.
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— melanosperma A. Braun ° 864. no. 2.
CUCURBITACEAE Juss. IV. 854.
Culcitium H. B. V. 295.
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Culcitium longifolium Turcz. ° 296. no. 3.
Cumingia Don VI. 137.
— campanulata Don (Gay.) ° 187. no. 1. †
Cunonia L. V. 31.
— Celebica Bl. Bidr. (s.) 31. no. 2.
— Indica Bl. Bidr. (s.) V. 29. 1. et 31. no. 1.
Cupania Plum. IV. 379.
— Brackenbridgei Gray ° 380. no. 7.
— falcata A. Gray ° 380. no. 5.
— frondosa Benth. ° 379. no. 3.
— geminata Poir. ° 379. no. 4.
— leptobotrys Gray ° 380. no. 8.
— rhoifolia A. Gray ° 380. no. 6.
— Richii A. Gray ° 380. no. 9.
— silvatica Seem. 379. no. 1.
— Spruceana Benth. ° 379. no. 2.
— subcinerea A. Gray ° 380. no. 10.
Cuphea Jacq. IV. 689.
— Wrightii A. Gray ° 689. no. 1.
Cupressus Tournef. V. 796.
— columnaris Forst. pr. (s.) 799. no. 1.
— Knightiana hort. (Roezl.) 796. no. 2.
— Lindleyi Klotzsch. 796. no. 1.
— Uhdeana Gord. 796. no. 3.
Cupularia Godr. & Gr. ° V. 201.
— graveolens Godr. & Gr. 201. no. 1. †
— viscosa Godr. & Gr. 201. no. 2. †
CUPULIFERAE Rich. V. 743.
Curculigo Gärtn. VI. 98.
— brevifolia ? Ait. 98. †
— Malabarica R. W. 98. †
— Sumatrana Roxb. 98. †
Curcuma L. VI. 19.
— aromatica Salisb. 19. †
— Neilgherrensis R. W. 19. †
— Roscoeana Wall. (Hook.) ° VI. 19. no. 1. †
— Zedoaria Roxb. (s.) 19. †
Cuscuta Tournef. V. 537.
— Arabica Wight (non Fres.) (s.) 537. n. 1. †
— Boissieri J. E. Stocks. ° 537. no. 1.
— densiflora Hook. f. ° 537. no. 2.
— Lehmanniana Bge. ° 537. no. 3.
Cutandia VI. 1029.
— scleropoides Willk. ° 1029. no. 1.
Cyanitis silvatica Reinw. (s.) V. 31. no. 1.
Cyanophyllum Naud. ° IV. 751.
— metallicum Naud. ° 751. no. 1.
Cyamus Nelumbo (s.) Smith IV. 151. no. 1. †
— mysticus Salisb. (s.) IV. 151. no. 1.
Cyanotis Don VI. 164.
— adscendens Dalz. ° 164. no. 3.
— Burmannia R. W. 165. no. 16. †
— cristata Roem. et Sch. 165. no. 4. †
— decumbens R. W. 165. no. 13. †
— dichotricha Stocks ms. 165. no. 11. †

Cyanotis fasciculata ? Roem. et Sch. 165. n. 10. †
— hispida Dalz. ° 164. no. 1.
— lanceolata R. W. 165. no. 7. †
— Lawiana R. W. 165. no. 9.
— longifolia R. Wight 165. no. 6. †
— papilionacea Roem. et Sch. 165. no. 15. †
— pilosa Roem. et Sch. 165. no. 5. †
— rosea R. W. 165. no. 8. †
— sarmentosa R. W. 165. no. 12. †
— vaginata R. W. 165. no. 14. †
— vivipara Dalz. ° 164. 2.
Cyathocnemis Klotzsch ° IV. 919. †
— obliqua Kl. ° 919. no. 1.
Cyathocalyx Champ. IV. 63.
— Zeylanicus Hook. et Th. ° IV. 63. no. 1.
Cyanospermum W. et Arn. IV. 568.
— Javanicum Miq. ° 568. no. 1.
Cybianthus Mart. V. 472.
— parviflorus Schlchtd. 472. no. 1.
CYCADEAE Rich. V. 803.
Cycas L. V. 803.
— circinalis Miq. 806. no. 1.
— Rumphii Miq. ° 806. no. 2. †
Cyclamen L. V. 469.
— Africanum Boiss. et R. 470. †
— Atkinsii (hybr.) Gardn. 470. †
— Europaeum L. 470. †
— Europaeum Vis. (s.) 469. no. 2.
— Hederaefolium Ait. 469. no. 1. †
— Hederaefolium Ten. (s.) 469. no. 2.
— Ibericum (hybr.) Gardn. 470. †
— repandum Sibth. 469. no. 2. †
— verum Lob. (s.) 469. no. 2. †
CYCLANDROPHORA Miq. ° (Parinarii sect.) IV. 645.
Cyclanthera Schrad. IV. 866.
— Matthewsii Arn.; A. Gray ° 866. no. 1.
Cyclea Arn. (Hook. et Th.) ° IV. 131.
— Burmanni Miers ° IV. 132. no. 1.
— Burmanni Arn. (s.) IV. 132. no. 2. †
— deltoides Miers ° IV. 132. no. 4.
— peltata H. et Th. ° IV. 132. no. 2.
— populifolia H. et Th. ° IV. 132. no. 3.
Cyclogyne Lindl. IV. 488.
— procumbens Ferd. Müll. 488. no. 1.
Cyclosia maculata Klotzsch (s.) VI. p. 562. no. 23.
Cycnoches Lindl. VI. p. 559.
— aureum Lindl. ° 561. no. 5. †
— barbatum Lindl. bot. mag. (s.) 618. no. 2.
— chlorochilon Klotzsch ° 560. no. 3.
— Dianae Rchb. f. ° 561. no. 6.
— Egertonianum Bot.; Lindl. ° 561. no. 7. †
— Loddigesii L. O. ° 559. no. 1. †
— maculatum Lindl. ° 561. no. 8.
Cycnoches musciferum Lindl. f. g. (s.) 618. no. 1.
— pentadactylon Lindl. ° 561. no. 4.
— Pescatorei Lindl. Fl. Gard. (s.) 562. no. 1.
— stelliferum Lodd. (s.) 561. no. 7.
— ventricosum Bat. ° 560. no. 2. †
— ventricosum Bat. ° 562. no. 2.
a) genuinum.
b) Egertonianum.
— ? Warszewiczii Rchb. f. ° (s.) 562. no. 2.
Cycnogeton Endl. VI. 5.
— Huegelii Endl. ° VI. 5. no. 1. †
— lineare Sond. ° VI. 5. no. 2.
Cycnopodium Naud. IV. 783.
— latifolium Naud. 783. no. 1.
CYLINDROLOBUS Rchb. (nec Lindl. nec Bl.) (Eriae sect.) ° VI. 273.
CYLINDROPUNTIA Engelm. ° (Opuntiae subg.) V. 54.
CYMBARIA And. ° (Anthistiriae sect.) VI. 1059. no. 14.
CYMBIDINA (Coelogynae sect.) ° VI. 22.
Cymbidium Sw. VI. 622.
— aloifolium Sw. ° 624. no. 8. †
— bicolor Lindl. 625. no. 10.
— chloranthum Lindl. ° 622. no. 5.
— dependens Lodd. (s.) 496. no. 2.
— Devonianum Paxt. 625. no. 9. †
— eburneum Lindl. 625. no. 14.
— elegans Lindl. ° 626. no. 16. †
— ensifolium Sw. Lindl. ° 622. no. 1.
α. striatum bot. mag.
β. estriatum.
— erectum Wight ° 623. no. 4.
— flabelliforme Swtz. (s.) VI. 652. no. 4.
— ? Gibsoni Paxt. ° 623. no. 3. †
— giganteum Wall. ° 626. no. 18. †
— Goeringii Rchb. f. 626. no. 18.
— ? ? iridifolium All. Cun. ° 625. no. 11.
— madidum Lindl. ° 624. no. 6.
— Mastersii Griff. ° 625. no. 15.
— Meyenii Schauer Act. Leop. ° (s.) VI. 457. no. 4.
— micans Schauer ° (s.) 623. no. 1.
— montanum Sw. (s.) 445. no. 58.
— nodosum Sw. (s.) 437. no. 56.
— ochroleucum Lindl. (s.) VI. 541. no. 1.
— pedicellatum Sw. 625. no. 13.
— pendulum Sw.; Lindl. ° 624. no. 7.
var. brevilabre.
„ atropurpureum.
— plicatum Harv. ° 625. no. 12. †
— pubescens Lindl. ° (s.) 625. no. 10.
— speciosissimum Don (s.) 229. no. 3.
— tenuifolium Lindl. (s.) 619. no. 4.

Cymbidium tessellioides Rchb. fil. Ind. (s.) 864. no. 1.
— triste Roxb. (s.) 622. no. 13. †
— triste Willd.; R. Wght. Ic. 911. (s.) 622. no. 14. †
— utriculatum Sw. (s.) VI. 556. no. 1.
— variciferum Rchb. (s.) 624. no. 5.
— vestitum Sw. (s.) VI. 491. no. 18.
— violaceum H. B. K. (s.) 318. no. 14.
— virens Lindl. ° 626. no. 17.
— Xiphifolium Lindl. bot. R. 623. no. 2.
— ? All. Cunningh ? 626. in fine.
Cymbocarpa Miers ° VI. 40.
Cymbogon elegans R. et Sch. (s.) VI. 1059. no. 14.
Cymodoce aequorea Koen. VI. 3. no. 1.
Cynanchum L. V. 501. †
— acutum L. 501. †
var. Monspeliaca. †
— continuum Koch syn. (s.) 500. no. 1.
— laxum Koch syn. (s.) 500. no. 2.
— recemosum? Jacq.Am.84.t. 51.(s.)502.n.1.
Cynara Vaill. V. 297.
— Cardunculus L. 297. no. 1. †
var. sativa Moris. ° †
CYNAREAE Less. (Compositar. tribus) V. 348.
Cynoctonae DCne. ° (Asclepiadear. divisio.) V. 501.
Cynodon Rich. VI. 990.
— Dactylon Pers.
α. normalis Büse. ° } 990. no. 1.
β. ciliatus Büse. ° }
γ. tenuis Büse. ° }
δ. australis Büse. ° }
Cynoglossum Tournef. V. 555.
— Anchusoides DC. pr. (s.) 539. no. 2. †
— Emodi Schouw (s.) 539. no. 2.
— glochidiatum Wall. 555. no. 1.
— longiflorum Benth. hort. mag. (s.) 539. no. 1. †
— longiflorum Benth. in Royle (s.) 558. n. 1.
Cynometra Linn. IV. 601.
— cauliflora L. ° 601 no. 1.
α. subsessilis Hassk. °
β. elongata Hassk. °
— falcata A. Gr. ° 601. no. 4.
— grandiflora A. Gr. ° 601. no. 3. †
— inaequifolia A. Gr. ° 601. no. 5.
— ramiflora L. 601. no. 2.
Cyphanthera Miers. ° V. 589.
— albicans Miers. ° 594. no. 4. †
— cuneata Miers. ° 594. no. 3. †
— frondosa Miers. ° 593. no. 1. †
— microphylla Miers. ° 594. no. 8. †
Cyphanthera ovalifolia Miers. ° 594. no. 7. †
— scabrella Miers. ° 594. no. 6. †
— Tasmanica Miers. ° 594. no. 2. †
— tomentosa Miers. ° 594. no. 5. †
Cyphiaceae DC. V. 392.
Cyphomandra Dun. (s.) V. 568.
— axyphylla Dun. (s.) 568. no. 4.
— ? Cajanumensis Dun. (s.) 568. no. 10.
— Capsicoides Dun. (s.) 568. no. 1.
— ? coriacea Dun. (s.) 568. no. 9.
— cornigera Dun. (s.) 568. no. 12.
— cylindrica Sendtn. (s.) 568. no. 8.
— divaricata Dun. (s.) 568. no. 2.
— elliptica Sendtn. (s.) 568. no. 7.
— Fraxinella Sendtn. (s.) 568. no. 11.
— ? Hartwegii Dun. (s.) 568. no. 5.
— laxiflora Dun. (s.) 568. no. 3.
— velutina Sendtn. (s.) 568. no. 6.
Cypripedium Socco Fl. Flum. (s.) VI. 569. no. 15.
Cyrilla pulchella Lher. (s.) V. 418. no. 1.
CYRTANDRACEAE W. Jack. V. 525.
Cyrtanthera Nees (Oerst.) ° V. 659.
— densiflora Oerst. ° 659. no. 1.
— macrantha Nees (s.) 641. no. 1.
— Pohliana Nees γ. velutina Nees (Hassk.)° 659. no. 2.
Cyrtantherella Oerd. ° V. 641. †
— macrantha Oerd. ° 641. no. 1.
Cyrtochilum aristatum hort. Petrop. (s.) VI. 755. no. 118.
— Bictoniense Bat. (s.) 835. no. 94.
— citrinum Hook. (s.) VI. 731. no. 65.
— filipes Lindl. ° (s.) 752. no. 110. B.
— flavescens Lindl. (s.) 758. no. 116. 1. †
— flexuosum H. B. K. (s.) 712. no. 22.
— graminifolium Lindl. (s.) 752. no. 110. A.
— Juergensianum Lam. ° (s.) 813. no. 192. †
— ixioides Lindl. (s.) 836. no. 40.
— Karwinskii Lindl. (s.) 842. no. 62. †
— leucochilum Planch. (s.) 800. no. 167. †
— maculatum Lindl. (s.) 754. no. 113. a. †
— maculatum parviflorum Bot. R. (s.) 754. no. 113. b. †
— maculatum var. Russelianum Lindl. (s.) 754. no. 113. b. †
— mystacinum Lindl. (s.) 690. no. 16.
— stellatum Lindl. (s.) 758. no. 116. 1. †
— undulatum H. B. K. (s.) VI. 709. no. 15. †
— volubile Poepp. (s.) VI. 711. no. 20. †
Cyrtodeira Hanst. ° V. 410. †
— cupreata Hanst. 410.
Cyrtopera Lindl. VI. 667.
— Cullenii R. Wight. (s.) 667. no. 1. †

Cyrtopera flava Lindl. ° 667. no. 1. †
— foliosa Lindl. ° 668. no. 5. †
— fusca R. Wight. ° 668. no. 2. †
— longifolia Rchb. f. ° 668. no. 4.
— pedicellata Lindl. 669. no. 6.
— scabrilinguis Lindl. (s.) 508. no. 4.
— squalida Rchb. f. ° 668. no. 3.
— Woodfordii Lindl. (s.) 668. no. 4.
Cyrtopodium R. Br. VI. 666.
— Andersoni R. Br. ° 667. no. 4.
— Blanchetii Rchb. f. 666. no. 2.
— bracteatum Linden herb. (s.) 667. n. 3.
— cardiochilum Lindl. ° 666. no. 1.
— cristatum Lindl. ° 667. no. 5. †
— elegans Ham. (s.) 438. no. 59. †
— parviflorum Lindl. ° 667. no. 6.
— punctatum Lindl. ° 666. no. 3. †
var. bracteatum Rchb. f. 667. no. 3.
Cyrtospadix C. Koch. ° V. 873.
— striatipes C. Koch. ° 873. no. 1.
Cyrtospermum Benth. ° IV. 445.
— gummiferum Benth. ° 445. no. 1.
Cystidianthus campanulatus Hassk. (s.) V. 505. †
Cytheris Griffithii R. W. (s.) VI. 460. no. 1. et 920. no. 33.
Cytisus L. (Vis.) ° IV. 470.
— Alschingeri Vis. ° 471. no. 4. †
— argyreia Rchb. (s.) 470. no. 2.
— diffusus Vis. 471. no. 10.
— germanicus Vis. 471. no. 9.
— Kitaibelii Vis. ° 471. no. 11.
— procumbens Spreng. (s.) 472. no. 11.
— pulchellus Vis. 471. no. 3.
— sericeus Vis. ° non W. 472. no. 12.
— sericeus W. sp. (s.) 472. sub no. 12 et 491. no. 1.
— silvestris Vis. ° 471. no. 6.
var. innocua Vis. °
var. pungens Vis. °
— spinescens Vis. 470. no. 2. †
— tinctorius Vis. 471. no. 7.
— Tommasinii Vis. 471. no. 5.
— triangularis Vis. 471. no. 8.
— Villarsii Vis. ° 470. no. 1. †

D.

Dacrydium Sol. V. 800.
— laxifolium Hook. f. ° 800. no. 1. †
Dactylis L. VI. 1026.
— glomerata L.
α. vulgaris Boiss. ° } 1027. n. 2.
β. australis Willk. ° } 1027. n. 2.
γ. funcinella Boiss. ° } 1027. n. 2.
— Lima L. 1027. no. 4.
— Palaestina Boiss. 1027. no. 3.
— rigida Boiss. ° 1026. no. 1.
Dactylocapnos (sect. gen. Dicentrae) H. et Th. ° IV. 178.
— thalictrifolia Wall. (s.) IV. 178. no. 4.
Dactylostylis Scheidw. ° (s.) VI. 564. no. 1.
— fimbriata Scheidw. ° (s.) 564. no. 1.
Daemonorops Bl. V. 827.
— accedens Bl. 828. no. 447.
— angustifolius Griff. 827. no. 436.
— barbatus Bl. 829. no. 458.
— Calapparius Bl. 829. no. 467.
— calicarpus Griff. 827. no. 429. †
— criaitus Bl. 828. no. 452.
— Draco Bl. 828. no. 449. †
— elongatus Bl. 828. no. 446.
— fasciculatus Mart. 829. no. 461.
— fissus Bl. 827. no. 434.
— fuscus Mart. 829. no. 465.
Daemonorops Gaudichaudii Mart. 829. no. 464.
— geniculatus Mart. 827. no. 445. †
— grandis Mart. 827. no. 432. †
— Guruba Mart. 828. no. 455. †
var. α. Hamiltonianus.
var. β. Mastersianus.
— heteracanthus Bl. 829. no. 459.
— hirsutus Bl. 828. no. 442.
— hygrophilus Mart. 827. no. 437. †
— hystrix Mart. 828. no. 441. †
— Jenkinsianus Griff. 827. no. 439. †
— intermedius Griff. 827. no. 433. †
— Korthalsii Bl. 828. no. 443.
— leptopus Mart. 828. no. 453.
— Lewisianus Griff. 827. no. 435.
— longipes Mart. 828. no. 444. †
— Malaccensis Mart. 827. no. 431.
— ? Manillensis Mart. 829. no. 460.
— melanochaetes Bl. 827. no. 427. †
— melanolepis Mart. 829. no. 468.
— mirabilis Mart. 828. no. 450. †
— monticola Griff. 827. no. 438. †
— niger Bl. 829. no. 462.
— nutantiflorus Griff. 827. no. 425.
— oblongus Mart. 828. no. 440. †
— Palembanicus Bl. 829. no. 463.
— petiolaris Griff. 827. no. 428. †

Daemonorops platyacanthus Mart. 828. n. 439. †
— platyspathus Mart. 828. no. 454.
— ramosissimus Griff. 828. no. 456.
— Rheedii 828. no. 457.
— ruber Mart. 828. no. 448.
— Rumphii Mart. 829. no. 466.
— strictus Griff. 827. no. 426.
— verticillaris Mart. 828. no. 451. †
Dahlia Cav. V. 209.
— rosea 209. no. 1. †
— variabilis (var. hybr.) Reg. 209. no. 2. †
Dalbergia L. IV. 575.
— angustifolia Hassk. (s.) 573. no. 1.
— argentea Zoll. (haud Zipp.) s. 584. no. 1.
— Blumei Hassk. (s.) 577. no. 9.
— cassinoides Wall. Cat. (s.) 578. no. 15.
— Cumingiana Benth. ° 576. no. 5.
— densa Benth. 577. no. 8.
— discolor Bl. (Miq.) ° 577. no. 7.
— emarginata Roxb. ° 575. no. 1.
— ferruginea Roxb. ° 578. no. 14.
— frondosa Roxb. 578. no. 16.
— heterophylla Willd. (s.) 581. no. 1.
— Javanica Miq. ° 578. no. 13.
— Junghuhnii Benth. ° 576. no. 4.
— latifolia Roxb. (Miq.) 575. no. 1.
— livida Grah. Wall. Cat. (s.) 578. no. 15.
— Luzoniensis Vogel? (s.) 577. no. 10.
— marginata Roxb. Wight. (s.) 572. et 584. no. 3.
— monosperma Dalz. IV. 577. no. 11.
— multijuga Wall. Cat.; Zoll et Mor. (s.) 577. no. 9.
— parviflora Roxb. ° 577. no. 12.
— phyllanthoides Bl. (s.) 578. no. 16.
— polyphylla Benth. 577. no. 10.
— pseudo-Sissoo Miq. ° 576. no. 3.
— purpurea Reinw. (s.) 572. no. 4.
— repens Spanoghe (s.) 581. no. 1. var.
— rostrata Hassk. (s.) 573. no. 5.
— rufa Wall. Cat. (s.) 577. no. 9.
— scandens Roxb. (s.) 579. no. 1.
— Sissoo Roxb. 575. no. 2.
— stipulacea Roxb. ° 578. no. 15. †
— Tamarindifolia Roxb. ° 577. no. 9.
— tingens Ham. Wall. Cat. (s.) 578. n. 15.
— torta Grah. Wall. Cat. (s.) 577. no. 11.
— Zollingeriana Miq. ° 576. no. 6.
Dalea Linn. IV. 482.
— albiflora A. Gray. ° 483. no. 1.
— arborascens Torr. (A. Gr.) ° 485. no. 15.
— argyrea A. Gr. ° 484. no. 8.
— brachystachys A. Gray. 483. no. 3.
— calycosa A. Gray. ° 484. no. 6.
— (conspectus specier. diagn.) 482.
Dalea Emeryi A. Gr. ° 485. no. 13.
— filiformis A. Gr. ° 484. no. 5.
— Fremontii Torr. (A. Gr.) ° 485. no. 16.
— Greggii A. Gr. ° 485. no. 12.
— lachnostachys A. Gr. ° 484. no. 7.
— laevigata A. Gray. ° 483. no. 2.
— lasiathera A. Gr. 484. no. 9.
— polygonoides A. Gray ° 483. no. 4.
— spinosa A. Gr. ° 485. no. 14.
— vulneraria Oerdst. ° 484. no. 11.
  α. brevidens. °
  β. typica. °
  γ. barbata. °
— Wrightii A. Gr. ° 484. no. 10.
Dammara Rumph. V. 799.
— macrophylla Lindl. (Hook.) ° 799. no. 1.
— obtusa Lindl. ° 799. no. 2. †
— Selanica Rumph. (s.) IV. 338. no. 3.
Dampiera R. Br. V. 376.
— adpressa Cunningh. 377. no. 23.
— alata Lindl. 378. no. 34.
— azurea Vr. 378. no. 26.
— bicolor de Vr. 377. no. 11.
— canescens Vr. 378. no. 37.
— cauloptera DC. 378. no. 33.
— coronata Lindl. 378. no. 38.
— cuneata Br. 378. no. 25.
— Cunninghami Vr. 377. no. 13.
— diversifolia Vr. ° 378. no. 39.
— Drummondi Vr. 376. no. 5.
— epiphylloidea de Vr. (s.) 378. no. 34.
— erecta Vr. (s.) 378. no. 27.
— eriocephali Vr. ° 379. no. 41. †
— eriophora Vr. (s.) 378. no. 27.
— fasciculata Br. 378. no. 28.
— ferruginea R. Br. (Vr.) ° 377. no. 16. †
— ferruginea Vr. anal. (s.) 377. no. 17.
— Hederacea Br. 376. no. 1.
— hematotricha Vr. ° 377. no. 17.
— incana Br. 377. no. 18.
— lanceolata Cunn. 377. no. 24. †
— lanuginosa Vr. ° 376. no. 4.
— Lavandulacea Lindl. 377. no. 22.
— Lindleyi Vr. pl. Preiss. (s.) 385. no. 1.
— Lindleyi Vr. (s.) 378. no. 33.
— linearis Vr. 378. no. 27.
— melanopogon Br. (Vr.) ° 377. no. 10.
— nervosa Vr. 377. no. 13.
— oblongata Br. 377. no. 29.
— omissa Vr. (olim) (s.) 377. no. 10.
— ovalifolia Br. 377. no. 9.
— parvifolia Br. 378. no. 32.
— ? Polygalacea Vr. ° 378. no. 38.
— Preissii Vr. 377. no. 21.
— prostrata Vr. ° 376. no. 6.

Dampiera prostrata Vr. (s.) 378. no. 30.
— purpurea Br. 377. no. 15.
— Reinwardtii Vr. 377. no. 20.
— repanda Vr. ° 376. no. 2.
— repens Vr. 378. no. 36.
— Rosmarinifolia Schlchtd. 377, no. 12.
— rotundifolia Br. 377. no. 8.
— stricta Br. 378. no. 31.
— subverticillata Vr. 378. no. 39.
— teres Lindl. 377. no. 19.
— trialata Vr. (s.) 378. no. 33.
— trigona Vr. in pl. Preiss. (s.) 378. n. 35.
— triloba Lindl. 376. no. 2.
— undulata Br. 377. no. 7.
— Verreauxii Vr. ° 378. no. 40. †
Danthonia DC. VI. p. 1003.
— Antarctica Hook. f. ° 1004. no. 5.
α. elata. °
β. laxiflora. °
γ. parviflora. °
δ. minor. °
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β. Unarede Raoul. °
γ. setifolia. °
— subulata Hook. f. ° 1003. no. 1. †
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— virgata Coss. et DR. pl. exs. (s.) 68. n. 1.
Devillea Tul. et Wedd. V. 788.
— flagelliformis Tul. et Wedd. 788. n. 1. †
Deyeuxia Clarion VI. 988.
— agrostidea Ph. ° 988. no. 3.
— Chilensis Em. Desv. ° 989. no. 4.
— chrysostachya E. Desv. ° 989. no. 5. †
var. β.
— erythrostachya E. Desv. ° 989. no. 6. †
— setifolia Hook. f. ° 989. no. 7. †
— vivipara Phil. ° 988. no. 1.
— vulcanica Phil. ° 988. no. 2.
DIACRIUM (Epidendri subg.) Lindl. III.
Diadenium Poepp. Endl. VI. 687.
— micranthum Poepp. Endl. ° 687. no. 1.
Dialesta H. B. K. V. 147.
— discolor H. B. K. 147. no. 1.
var. polychaeta Steetz °
Dialium L. IV. 612.
— Indum L. 612. no. 1.
Diantheae Kath. IV. 264.
Dianthus L. IV. 264.
DIANTHORUM conspectus Willk. ° IV. 264.
Dianthus alpinus L. IV. 276. no. 38. †
— Anticarius B. et R. (Willk.) IV. 267. no. 6. †
— atro-rubens All. var. cruentus Gr. IV. 267. no. 4.

Dianthus atrorubens Vis. stirp. (s.) IV. 278. no. 23.
— attenuatus Smith IV. 272. no. 20. †
— Barati Duval-Jouve. ° IV. 274. no. 30.
— bebius Vis. in Rchb. Ic. fl. germ. (s.) IV. 274. no. 22. β.
— Boissieri Willk. ° IV. 271. no 15. †
— brachyanthus var. Ruscinonensis Boiss. ° IV. 270. no. 13. †
— brachyanthus Boiss. var. macranthus (s.) IV. 270. no. 13.
— Broteri Boiss. et Reut ° IV. 273. n. 22.
— caespitosifolius Planellas (s.) IV. 268. no 8.
— callizonus Schott et Kotschy ° IV. 275. no. 34.
— carthusianorum L.
var. γ. herbaceus Personnat ° IV. 267. no. 3.
— caryophylloides Schult. IV. 276. n. 36. †
— Caryophyllus L. IV. 271. no. 14. †
var. Juwesi v. Arnstadt IV. 271. n. 14. †
— ciliatus Guss.
var. α. racemosus Vis. ° IV. 273. no. 25. α. †
— ciliatus b. litoralis Reichb. (s.) IV. 273. no. 25. α. †
var. β. cymosus Vis. ° 273. no. 25. β. †
var. γ. Brocchianus Vis. IV. 274. no. 25. γ.
— Cintranus B. et R. (Willk.) ° IV. 269. no. 11. †
— crassipes Roem. (Willk.) ° IV. 266. no. 2. †
— Cremeri B. et Reut. ° IV. 275. no. 32.
— cruentus Fisch. (s.) IV. 267. no. 4. †
— cyatophorus Moris IV. 224. no. 29.
— divaricatus Urv. (s.) IV. 275. no. 30.
— fimbriatus Br. et M. B. (s.) IV. 273. n. 22.
— furcatus Balb. (s.) IV. 267. no. 7.
— Granaticus Jord. (Willk.) ° IV. 268. n. 10. †
— Henteri Heuff. ° IV. 276. no. 35.
— hirsutus auct. Gallic. exp. non Villars (s.) IV. 268. no. 10.
— Hispanicus Asso ° IV. 269. no. 12. †
var. α. australis Willk. ° IV. 270. no. 12. α. †
var. β. borealis Willk. ° IV. 270. no. 12. β. †
var. γ. occidentalis Willk. ° IV. 270. no. 12. γ. †
— Hispanicus Boiss. (s.) IV. 270. n. 12. α.
— integer Vis., Rchb. (s.) IV. 267. no. 7.
— laricifolius B. et R. IV. 262. no. 9. †
Dianthus litoralis Host (s.) IV. 274. no. 25. β.
— Lusitanicus Brot. ° (Willk.) ° IV. 271. no. 19. †
— multinervis Vis. ° IV. 274. no. 28.
— mutabilis Boiss. IV. 266. no. 1.
— obcordatus Reut. et Marggr.; Vis. ° IV. 273. no. 24.
— aculeatus Boiss. ° IV. 275. no. 31.
— pelviformis Heuff. ° IV. 275. no. 33.
— Planellae Willk. ° IV. 268. no. 8. †
— pungens Godr. (Willk.) ° IV. 267. n. 7. †
— pungens Webb it. Hisp. (s.) IV. 270. no. 12. α.
— pungens β. Hispanicus DC. (s.) IV. 270. no. 12. β.
— pungens Benth. Cat. Pyr. (s.) IV. 270. n. 13.
— racemosus Vis. Rchb. (s.) IV. 273. no. 25. α †
— repens Willd. IV. 276. no. 37. †
— Requinii Godr. et Gren. ° IV. 271. n. 18.
— sanguineus Vis. fl. Dalm. ° IV. 273. no. 23. †
— saxicola Jord. IV. 271. no. 16. †
— serrulatus Brocchi herb. (s.) IV. 274. no. 25. γ.
— serrulatus Boiss. voy. var. grandiflora (s.) IV. 273. no. 22.
— silvestris Wulf. IV. 271. no. 15. †
— strictus Sm. et Sibth. IV. 274. no. 27. †
var. β. grandiflorus Vis. ° IV. 274. no. 27. β. †
— Tolutanus B. et R. IV. 267. no. 5. †
— tripunctatus Smith. et Sibth. IV. 275. n. 30.
— Valentinus Willk. ° IV. 272. no. 21. †
— virgineus Koch Syn. (s.) IV. 270. n. 13.
— viridescens Vis. IV. 274. no. 26.
Diapensiaceae DC. pr. V. 530.
Diaphane edulis Salisb. (s.) VI. 46. no. 1.
Diaspasis Endl. V. 370. 387.
— filifolia DC. pr 387. no. 1.
Diastema Benth. ° V. 408. 416. 424. †
— Caracasanum Kl. et Hanst. ° 426. no. 1.
— discolor Benth. ° 425. no. 6.
— divaricatum Benth. ° 426. no. 12.
— ? Erinoideus Benth. pl. Hartw. (s.) 429. no. 5.
— Gloxiniflorum Reg. Cat. (s.) 498. no. 1.
— gracile Reg. (s.) 422. no. 2.
— incisum Benth. ° 425. no. 9.
— longiflorum Benth. ° 424. no. 3.
— maculatum Benth. ° 425. no. 5.
— molle Benth. ° 426. no. 10.
— ochroleucum Hook. bot. mag. ° 924. n. 2. †
— quinquevulnerum Planch. ° 425. no. 8.
— racemiferum Benth. ° 424. no. 1.

Diastema scabrum Benth. ° 425. no. 7.
— tenerrimum Benth. ° 426. no. 11.
— Urticifolium Benth. ° 425. no. 8.
Diastemella (Diastematiea) Oerd. ° V. 406. 416. 426. †
— bracteosa Oerd. ° 426. no. 1. †
Diatosperma A. Gr. ° V. 211.
— Drummondii A. Gr. ° V. 211. no. 1.
Dicentra Borkh. ° IV. 177.
Dicentra Borkh. (Capnorchidis subg. Pl.) IV. 176.
— chrysantha (s.) IV. 177. no. 1.
— Roylei H. et Th. ° IV. 177. no. 2.
— scandens ° IV. 178. no. 3.
— thalictrifolia H. et Th. ° IV. 178. no. 4.
— torulosa H. et Th. ° IV. 177. no. 1.
Dicerma DC. (Benth.) ° IV. 544.
— biauriculatum DC. 544. no. 1.
— elegans DC. (s.) 544. no. 2.
— pulchellum DC. (s.) 544. no. 1.
— vestitum Wall. (s.) 544. no. 3.
Dichaea Lindl. VI. 823.
— glauca Lindl. ° 823. no. 4.
— graminoides Lindl. 823. no. 1.
— ochracea Lindl. ° 823. no. 3.
— Oerstedii Rchb. ° 824. no. 5.
— squarrosa Lindl. ° 823. no. 2.
Dichaena Naud. ° (Miconiae subsect.) IV. 742. C.
Dichelachne Endl. VI. 972.
— crinita Hook. f. ° 972. no. 1.
— Forsteriana Trin. et R. (s.) 972. no. 1.
— Hookeriana Trin. et R. (s.) 972. no. 1.
— longiseta Trin. et Rupr. (s.) 972. no. 1.
— sciurea Hook. f. ° 972. no. 2.
— stipoides Hook. f. ° 972. no. 3.
— vulgaris Trin. et Rupr. (s) 972. no. 1.
Dichopetalum Ferd. Müll. ° V. 60.
— ranunculaceum F. Müll. ° 60. no. 1. †
Dichorisandra Mik. VI. 165.
— incurva Mart. var. glabrescens 166. no. 4. †
— latifolia Knth. (s.) 166. no. 5.
— Leandri Knth. (s.) 165. no. 2.
— leucophtalmos Hook. ° 166. no. 7. †
— marginata Schlechtd. ° 166. no. 8.
— oxypetala Hook. (Mart.) ° 166. no. 5.
— penduliflora Mart. 166. no. 6. †
— picta Hook. (Mart.) ° 166 no. 3. †
— Tejucensis Mart. ° 165. no. 2. †
— Tejucensis Knth. (s.) 165. no. 2.
— thyrsiflora Mik. 165. no. 1. †
Dichosema Benth. IV. 458.
— subinerme Meisn. 458. no. 1. †
Dichospermum R. W. VI. 158.
— Juncoides R. W. 158. †
— lanceolatum R. W. 158. †
— repens R. W. 158. †
Dichrocephala DC. V. 195.
— bicolor Schlchtd. 195. no. 1.
α. integrifolia.
β. dissecta.
γ. lyratifolia.
— Chrysanthemifolia DC. 195. no. 2.
— latifolia DC. pr. (s.) 195. no. 1.
— sonchifolia DC. pr. (s.) 195. no. 1.
Dichrostachys DC. IV. 615.
— cinerea W. et Arn. 615. no. 1.
β. paucijuga Miq. °
Dichynchosia Bl. ° V. 31.
— Celebica Bl. (Cunonia Celebica) V. 31. no. 2.
Diclemia Naud. ° IV. 776.
— petiolaris Naud. ° 776. no. 1.
Diclidocarpus A. Gray. ° IV. 329.
— Richii A. Gray ° 329. no. 1.
Dicliptera Juss. V. 666.
— trifurca Oerst. ° 666. no. 1.
Dicraea Tul. V. 782.
— dichotoma Tul. 783. no. 4. † et no. 4.
— elongata Tul. 783. no. 7. †
— erythrolichen Tul. et Wedd. ° 783. n. 8. †
— imbricata Tul. 783. no. 2.
— minutiflora Tul. 782. no. 1.
— rigida Tul. 783. no. 6.
— Wallichii Tul. 783. no. 3.
— Wightii Tul. 783. no. 5.
— Willdenowii Tul. (s.) 781. no. 10.
Dicranacanthus Oerst. ° V. 654.
— bispinosa Oerst. 654
— Buxifolia Oerst. 654.
— spina-Zeilanica Oerst. 654.
— spinicyma Oerst. 654.
— stimulans Oerst. 654.
Dicranocarpus A. Gr. ° V. 211.
— parviflorus A. Gr. ° 212. no. 1.
Dicranostigma H. et Th. ° IV. 172.
— lactucoides H. et Th. ° IV. 172. no. 1.
Dicrocytyleae Harv. V. 708.
Dicrastylis J. Drumm. V. 708.
— fulva J. Drum. ° 709. no. 1.
— reticulata J. Drum. ° 708. no. 2.
— stoechas J. Drum. ° 708. no. 3.
Dicrypta Baueri Lindl. (s.) VI. 929. n. 77.
— densifolia Endl. Poepp. ° (s.) 932. n. 97. †
— discolor Lodd. (s.) VI. 929. no. 78. †
— elatior Rchb. f. (s.) 932. no. 99.
Dictyanthus Dcne V. 565.

Dictyanthus Pavonii Decne ° 503. no. 1. †
— Stapeliaeflorus Rchb. ° 503. no. 2.
Dictyocalyx Miersii DC. pr. (s.) V. 573. n. 2.
Dictyospermum R. W. VI. 157.
— montanum R. W. 157. †
— ovalifolium R. W. 157. †
— pretensum R. W. 157. †
Dictyostegia Poeppigiana Kl. (s.) VI. 41. no. 2.
Dicyrta Reg. ° V. 406. 414. 422. †
— Candida Hanst. et Kl. ° 422. no. 2.
— Warscewicziana Reg. ° 422. no. 1.
Didactyle Rchb. f. ° (sect. Bolbophylli) VI. 250.
— aptenniflora Lindl. (s.) 250. no. 25.
— exaltata Lindl. (s.) 250. no. 24.
— gladiata Lindl. (s.) 251. no. 27.
— Meridense Lindl. (s.) 251. no. 26.
— tripetala Lindl. (s.) 250. no. 29.
— Weddelii Lindl. (s.) 250. no. 28.
Didiscus DC. V. 59.
— glaucifolius F. Müll. ° 59. no. 1.
Didymocarpus Wall. V. 526.
— crinita Hook. ° 526. †
— cristata Dalz. ° 526. no. 1.
— Humboldtiana Gardn. ° 526. †
— ? Primulaefolia Gardn. (s.) 526.
Didymochiton Bl. IV. 387.
— Richii A. Gray ° 387. no. 1.
Didymotheca Hook. f. V. 742.
— Veroniciformis F. Müller ° 742. no. 1.
Dieffenbachia Schott V. 894.
— costata Schott ° 894. no. 3.
— lineata C. Koch et Bouché ° 894. n. 5.
— liturata Schott ° 894. no. 1.
— robusta C. Koch ° 895. no. 6.
— robusta Schott ° 895. no. 6. a.
— Seguine Schott 894. no. 2.
— sp. Schott ° 894. no. 4.
Diemenia Korth. ° IV. 649.
— racemosa Korth. ° 649. no. 1.
(conf. Trichocarya splendens Miq. et Licania Diemenia Bl.)
Dienia Lindl. (s.) 206. no. 5. (obs.)
— carinata Rchb. f. (s.) 206. no. 9.
— congesta Lindl. (s.) 206. no. 6.
— cordata Lindl. (s.) 206. no. 11.
— crispata Lindl. (s.) 206. no. 10.
— cylindrostachya Lindl. (s.) 206. no. 8. †
— fusca Lindl. (s.) 206. no. 7.
— Myurus Lindl. (s.) 206. no. 13.
Dierama K. Koch ° VI. 42.
— ensifolium Koch et Bouché 43. no. 1.
Dieteria asteroides Torr. (s.) V. 175. n. 2.
Dietes bicolor Sweet (s.) VI. 47. no. 2.
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— ferruginea L. 630. no. 2.
— laevigata-lanata (hybr.) Bisch. 630. no. 3.
— lanata Ehrh. 629. no. 1.
— orientalis Lam. 630. †
Digitaria Scop. V. 955.
— aegyptiaca Willd. 957. no. 13.
— chrysoblephara Fig. et Not. ° 957. n. 14. †
— ciliaris Pers. (Büse) ° 955. no. 1.
— decipiens Fig. et Not. 957. no. 12. †
— digitata Büse ° 956. no. 3.
— pertenuis Büse ° 956. no. 5.
— pes avis Büse ° 955. no. 2.
— pruriens Büse var. α. et β. 956. no. 8.
— pseudo-Durva Nees.? 956. no. 9.
— pseudo-Ischaemum Büse ° 956. n. 6.
— ropalotricha Büse ° 956. no. 4.
β. glabrescens.
— setosa Desv. (s.) 1018. no. 4.
— urochloides Büse ° 956. no. 7.
— variabilis Fig. et Not. 957. no. 11. †
— vestita Fig. et Not. 956. no. 10. †
Dignathe Lindl. ° VI. 682.
— pygmaea Lindl. ° 682. no. 1.
Dillenia Lin. (H. et Th.) ° IV. 33.
— augusta Roxb. (s.) IV. 33. no. 5.
— aurea Smith (Hk. et Th.) ° IV. 33. n. 4.
— dentata (DC.) (s.) IV. 35. no. 5.
— elliptica Thbrg. (s.) IV. 33. no. 1.
— floribunda H. f. et Th. ° IV. 33. no. 2.
— Indica L. (s.) IV. 33. no. 1.
— integra DC. (s.) IV. 35. no. 4.
— ornata Wall. (s.) IV. 33. no. 4.
— ovata Wall. (Hook. et Th.) ° IV. 33. n. 3.
— pentagyna Roxb. (H. et Th.) ° IV. 33. n. 5.
— pilosa Roxb. (s.) IV. 33. no. 5.
— retusa DC. (s.) IV. 34. no. 2.
— speciosa Thbrg. IV. 33. no. 1.
Dilophia Th. ° IV. 209.
— salsa Th. ° IV. 209. no. 1. †
Dimetopia DC. V. 59.
— hirta Benth. (adnot.) 59. no. 1.
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— australis A. Gr. ° 276. no. 1. †
Dinema paleaceum Lindl. (s.) VI. 323. n. 33.
— polybulbum Lindl. (s.) 322. no. 26.
Dinochloa Büse ° VI. 1045.
— Tjankorreb 1046. no. 1.
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Dioryctandra Hassk. ° IV. 235.
— Roxburghii Hassk. IV. 236. no. 1.
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Diosma betulina Thunb. (s.) IV. 413. n. 2. β.
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— crenata Thunb. (s.) 413. no. 2. α.
— crenata Loddiges (s.) 412. no. 1. †
— latifolia Loddiges (s.) 413. no. 4. γ. †
— odorata DC. (s.) 413. no. 4. β.
— serratifora var. β. Bartl. et Wendl. (s.) 413. no. 4. β.
— serratifolia Juss. (s.) 413. no. 4. γ. †
— serratifolia Busch, Vent. (s.) 413. n. 4. β.
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— aurea Teysm. et B. ° 478. no. 1.
— Coindu Dalz. ° 479. no. 6.
— eriantha Champ. ° 479. no. 7.
— laurifolia A. Rich. ° 480. no. 9. †
— laxa Teysm. et B. ° 478. no. 2.
— Lotus L. 480. †
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— paniculata Dalz. ° 479. no. 3.
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— heterothonaea Rchb. ° 447. no. 4.
— imbricata Lindl. (s.) VI. 470. no. 2.
— Lloensis Lindl. ° 446. no. 1.
— suavis Rchb. ° 446. no. 3.
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— Robinioides Benth. ° 493. no. 1.
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— flava Hook. ° 496. no. 3. †
— Harrisii Hook. ° 496. no. 1. †
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— Fothergilla DC. (s.) 707. no. 6.
— leucocephala DC. (s.) 707. no. 5.
— mucronata DC. (s.) 707. no. 7.
— parviflora DC. (s.) 708. no. 9.
— serrulata DC. (s.) 707. no. 5.
— Swartziana DC. (s.) 707. no. 6.
Diploclinium R. Wight. (Kl.) ° IV. 9[illegible] †
— Arnottianum R. Wight. ° 903. no. 1. †
— cordifolium R. Wight. ° 904. no. 2. †
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Dipodium pictum Rchb. f. ° 647. no. 2.
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— geminiflorus Nees (s.) 639. no. 3.
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— humilis Nees (s.) 639. no. 4.
— hirsuto-glandulosus Oerd. ° 648. no. 4.
— longepetiolatus Oerd. ° 648. no. 3.
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— longiflorus Nees (s.) V. 639. no. 1.
— macrophyllus Oerd. ° 648. no. 1.
— Schlechtendaliana Nees (s.) 639. no. 1.
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— Hasseltii (haud Bl.) Korth. (s.) 335. n. 3.
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— flexispinus Engelm. non Salm (s.) 40. no. 8. α.
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— hamatus Mühlenpf. (s.) 39. no. 6. α.
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— longehamatus Gal. (Eng.) ° 39. no. 8.
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— cinerea A. Rich. ° 494. no. 3.
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— paniculatum Fl. Reinw. ° 376. no. 226. b. longicrure. c. cuspidatum.
— paniculatum Descourt. (s.) VI. 683. n. 8. †
— papilionaceum West. S. Cruz. (s.) 343. no. 98.
— papillosum Batem.; Hook. (s.) 339. no. 85. †
— parallelum Reichb.; Lindl. ° 351. no. 130.
Epidendrum Parenthicum Rchb.; Lindl. ° 387. no. 267.
— Parkinsonianum Hook. (s.) 348. n. 119. †
— parviflorum Fl. Peruv. (Rchb.) ° 365. no. 192.
— parvilabre Lindl. ° 351. no. 129.
— Pastoris La Llave; Lindl. ° 333. no. 63.
— Pastoris Lk. et Otto (s.) 332. no. 61. †
— patens Sw.; Lindl. ° 381. no. 255. †
— Paytense Rchb. f. ° 391. no. 276.
— pentadactylum Rchb. f. ° 375. no. 221.
— Peperomia Rchb. f. ° 368. no. 199.
— Philippii Reichb.; Lindl. ° 405. no. 328.
— phoeniceum Lindl. ° 344. no. 102. † var. vanillosmum V. Houtte. †
— phymatoglossum Rchb. ° 342. no. 94.
— phymatoglossum Rchb. (s.) ? 341. n. 92.
— pictum Lindl. ° 334. no. 68.
— (Pleuranthium) pileatum Rchb. f. ° 413. no. 372.
— piperinum Lindl. ° 401. no. 313.
— plicatum Lindl. ° 329. no. 53. †
— polyanthum LO.; Batem. ° 379. no. 238. var. a. et b. °
— polyanthemum bot. Gall. (s.) 330. n. 57.
— polybulbum Sw. 322. no. 27.
— polystachyum H. B. K. Lindl. ° 350. no. 124.
— Porpax Rchb. f. ° 368. no. 198.
— porphyreum Lindl. ° 377. no. 229.
— primulinum Batem. (s.) 336. no. 73. †
— prismatocarpum Rchb. f. ° 322. no. 25.
— pruinosum Rich. et Gal. ° 352. no. 133.
— propinquum Rich. et Gal. ° 405. no. 326.
— pseudepidendrum Rchb. f. ° 414. n. 368.
— pterocarpum Lindl. ° 326. no. 44. †
— pulchellum Rich. et Gal. ° 354. no. 146.
— pulcherrimum Klotzsch ° 393. ad n. 281.
— punctatum Lindl. ° 323. no. 32.
— puniceum Rchb. f. 323. no. 31.
— purpurascens Focke ° 349. ad no. 121.
— purum Lindl. ° 412. no. 361.
— purum Rchb. f. ° 412. ad no. 361.
— pygmaeum Hook. ° 346. no. 108. †
— pyriforme Lindl. ° 343. no. 97. †
— quadratum Rchb.; Lindl. ° 406. no. 332.
— quadratum Klotzsch ° (s.) 341. no. 92.
— Quitensium Rchb. ° 392. no. 279.
— radiatum Lindl. ° 359. no. 163. †
— radiatum Hoffmgg. (s.) 403. no. 317.
— radicans Pav. ° 390. no. 273.
— ramosum Jacq.; Lindl. ° 399. n. 305. †
— raniferum LO.; Lindl. 372. no. 214. † var. α. β. γ.
— recurvatum Lindl. ° 410. no. 351.

Epidendrum refractum Lindl. ° 353. n. 143.
— replicatum Lindl. ° 327. no. 48. †
— rhaphidophorum Rchb.; Lindl. ° 371. no. 211.
— rhizophorum Batem. (s.) 390. no. 273.
— rhynchophorum Rich. et Gal. ° 352. no. 131.
— rigidum Jacq.; Hook.; Lindl. ° 400. no. 307. †
— rigidum Lodd. (s.) 399. no. 305. †
— rubrocinctum Lindl. (s.) 379. no. 238. b.
— rufum Lindl. ° 336. no. 73.
— rupestre Lindl. ° 352. no. 135.
— Sagraeanum A. Rich. ° 330. ad no. 57. †
— sanguineum Sw. 324. no. 36. †
var. β.
— sarcochilum Lind.; Rchb. f. ° 363. n. 177.
— sarcodes Rchb.; Lindl. ° 362. no. 174.
— sarcophyllum Focke ° 398. ad no 301.
— sarcostalix Rchb. et Warsc. ° 406. n. 330.
— satyrioides Sw. (s.) 684. no. 1.
— saxatile Lindl. ° 352. no. 132.
— scabrum Fl. Peruv.; Lindl. ° 408. n. 342.
— sceptrum Lindl. ° 352. no. 142.
— Schillerianum Rchb. f. 318. no. 46.
— Schlimii H. G. Reichb. ° 361. no. 170.
— Schlimii Lindl. (s.) 396. no. 297.
— Schomburgkii Lindl. ° 389. no. 272.
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— scriptum Rich. et Gal.; Lindl. ° 407. no. 334.
— sculptum Lindl. ° 401. no. 314.
— Scutella Lindl. ° 367. no. 194.
— secundum Linn. Jacq. (s.) 393. no. 292. †
— selligerum Batem.; Lindl. ° 327. no. 47.
— Sellowii Rchb.; Lindl. ° 383. no. 252.
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— setiferum Lindl. ° 381. no. 244.
— sinuosum Rchb.; Lindl. ° 363. no. 178
— sinuosum Lindl.; Reg. G. Fl. ° 370. ad no. 206. †
— Sisyrinchifolium Rich. et Gal.; Lindl. ° 341. no. 91.
— Skinneri Batem.; Hook.; Lindl. ° 382. no. 249. †
— smaragdinum Lindl. ° 386. no. 262.
— Socorense Rchb. et Warsc. ° 396. n. 297.
— spathaceum Lindl. ° 371. no. 213.
— spectabile Rchb. f. ° 375. no. 223.
— spectatissimum Rchb. f. ° 369. no. 205.
— (Encyclium) spectabile Focke ° (s.) 328. ad no. 51.
— spicatum Hook. ° 389. no. 269.
Epidendrum spinescens Rchb.; Lindl. ° 392. no. 281.
— Spondiadum H. G. Rchb.; ° Lindl. 356. no. 150.
— Spruceanum Lindl. ° 404. ad no. 322.
— squalidum Llave; Lindl. ° 326. no. 43.
— Stamfordianum Batem.; Lindl. ° 415. no. 373. †
var. pictum Lem. ° †
— stellatum Rchb. f.; Lindl. ° 339. no. 86.
— stenopetalum Hook. ° 402. no. 316. et p. 817. †
— stramineum Lind. ° 351. no. 128.
— strobiliferum Rchb. f. ° 399. no. 306.
— subaquilinum Lindl. ° 322. no. 28. †
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— tenuiflorum hort. (s.) 410. no. 352.
— teres Rchb. f. ° 398. no. 302.
— teres Thunb. (s.) 621. no. 8. †
— tessellatum. Batem.; Hook.; Lindl. ° 340. no. 90. †
— tetraceros Rchb. f. ° 403. no. 320.
— tetragonum Thomas Orch. Afr. ° (s.) 458. no. 2. †
— tibicinis Batem. (s.) 429. no. 34.
— tigrinum Lindl. ° 354. no. 147.
— tipuloideum Rchb. °, Lindl. 350. no. 126.
— Tolimense Lindl. ° 402. no. 315.
— torquatum Lindl. ° 408. no. 343.
— Tovarense Rchb. f. ° 370. no. 206.
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— trachychilum Rchb. f. ° 338. no. 81.
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— tridactylum Lindl. (s.) 485. no. 1.
— tridens Poepp. et Endl. (s) 404. n. 322. †
— Trinitatis Lindl. ° 364. no. 181.
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— tripunctatum Rchb.; Lindl. ° 359. n. 159.
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— triste Forst. (s.) 621. no. 6.
— ? turbinatum La Ll. Lindl. ° 417. n. 377.
— umbellatum Sw.; bot. mag. (s.) 402. no. 317.
— uniflorum Lindl. bot. Reg. (s.) 346. n. 108.
— utricularioides Sw. (s.) 681. no. 5.
— vandifolium Lindl. ° 387. no. 264 (bis.)
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c. crassilabium.
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— ventricosum Lindl. ° 361. no. 169.
— vernixium Rchb. et Warscz. ° 407. n. 339.
— verrucosum Sw.; Lindl. ° 414 no. 367.
— verrucosum Lindl. bot. reg. et Hook. (s.) 339. no. 83. †
— vesicatum Lindl. ° 397. no. 299.
— Vieji Rchb. f. ° 381. no. 245.
— Vincentinum Lindl. ° 411. no. 356.
— violaceum Rchb. f. ° 318. no. 14.
— violaceum Lodd. bot. Cab. (s.) 316. no. 11.
— virens Lindl. ° 337. no. 78. †
— ? virens Hoffmgg. (s.) 403. no. 318.
— virescens Lodd. (s.) 385. no. 260. b.
— virgatum Lindl. ° 332. no. 59.
— viride Fl. Per.; Lindl. ° 417. no. 381.
— viridibrunneum Rchb. f. ° 368. no. 200.
— viridiflorum Lindl. ° 335. no. 72.
— viridipurpureum Hook. (s.) 385. n. 260. c.
— vitellinum LO. ° 321. no. 22. †
— viviparum Lindl. ° 348. no. 120.
— vomeriforme Swartz; Lindl. ° 416. n. 375.
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— xantholeucum Rchb.; Lindl. ° 374. n. 218.
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— xytriophorum Rchb. et Warscz. ° 394. no. 287.
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— alpestre Rchb. Ic. (s.) 679. no. 12. †
— alpinum L. fl. Suec.; Fr. And. ° 679. no. 8.
— alpinum auct. fl. Germ. et Gall. (non L.) (s.) 679. no. 9.
— alsinefolium Vill. 678. no. 5.
— ambiguum Fr. (s.) 679. no. 11.
— anagallifolium Lam. ° 679. no. 9.
Epilobium angustissimum Wender. (s.) 68[illegible] no. 3.
— Carpetanum Willk. ° 680. no. 4.
— chordorhizum Fr. 678. no. 2.
— collinum Gmel. (s.) 680. no. 16.
— crassifolium Lehm. ° (s.) 680. no. 1.
— denticulatum Wender. 680. no. 1.
— Duriaei Gay Godr. ° 678. no. 6.
— Fleischeri Hochst. ° (s.) 680. no. 1.
— hirsutum L. 680. no. 18.
— Hornemanni Rchb. ic. (s.) 679. no. 1.
— hypericifolium Tausch ° 679 no. 11.
— Lamyi Schulz (s.) 679. no. 11.
— lanceolatum Seb. ° 679. no. 15.
— lineare Anders. Fr. (s.) 678. no. 1.
— lineare Mühlenb. 678. no. 3.
— macropus Hook. ° 681. no. 6. †
— melanocaulon Hook. ° 681. no. 7.
— montanum L. ° 679. no. 16.
— montanum β. lanceolatum Spic. [illegible] 679. no. 15.
— nutans Schm. Tsch. 678 no. 4 †
— nutans Sommerf.; Hornem. (s.) 6[illegible] no. 3.
— obscurum Schreb. Rchb. 679. no. 1. [illegible] 680. no. 1.
— oliganthum Mich. (s.) 678. no. 3.
— origanifolium Lam. Koch Andrz. 679 no. 5. †
— palustre L. 678. no. 1.
— parviflorum Schreb. 680. no. 17.
— Persicinum Rchb. (s.) 680. no. 16.
— roseum Schreb. ° 679. no. 13. †
— salicifolium Facch. ° 680. no. 1.
— Schmidtianum Rostk. (s.) 678. no. 1.
— squamatum Nutt. (s.) 678. no. 3.
— tetragonum L. sp. 679. no. 11.
— tetragonum Fb. Dan. (s.) 679. no. 10. †
— trigonum Schrenck 679. no. 12.
— Uralense Rupr. ° 680. no. 5.
— virgatum Fr. Summ. (s.) 678. no. 2.
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— bicolor Hook. bot. mag. (s.) 410. †
— hispida DC. pr. (s.) 425. no. 10.
— Melittifolia DC. (s.) 410.
— reptans Mart. (spec. typ.) 410. †
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— amabilis Steud. 1018. no. 2.
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β. scabriuscula Böse °
γ. prostrata Böse °
δ. contracta Böse °
— geniculata Dur. (s.) 1017. no. 1. †
— megastachya Lk. 1018. no. 3.
— poaeoides P. B. 1018. no. 4.
— thyrsiflora Willk. ° (s.) 1018. no. 8.
— trichophora Coss. et Dur. ° 1017. no. 1.
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— (Siphoneranthemum) fasciculatum Orst.° 664. no. 1.
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— Prenanthoides DC. pr. 290. no. 4.
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— adenantha Jaub. et Sp. ° 700. no. 3. †
— Araleasis Bge ° 701. no. 11.
— glabra Boiss. 699. no. 1.
— Iberica Vis. ° 700. no. 6. †
— laciniata auct. (s.) 699. et 700. no. 2-7.
— macrochila Jaub. et Sp. ° 700. no. 7. †
— macrophylla Montbr. et Auch. ms. (Jaub. et Sp.) ° 701. no. 8. †.
— macrophylla DC. pr. (s.) 701. no. 8. et 9.
— pulvinaris Jaub. et Sp. ° 700. no. 4. †
— pyramidalis Jaub. et Sp. ° 701. no. 9. †
— sanguinea Jaub. et Sp. ° 700. no. 5. †
— Tournefortii Jaub. et Sp. ° 699. no. 2. †
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— Aeis Rchb. f. ° 270. no. 13. †
— Armeniaca Lindl. (s.) 220. no. 17.
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— coronaria Rchb. f. ° 271. no. 23.
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— Dillwyniana Hook. ° 278. no. 48.
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— ferruginea Lindl. ° 274. no. 33.
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— depressum R. Br. ° 927. no. 3.
— deustum R. Br. ° 927. no. 4.
— dictyophyllum Körn. 930. no. 20.
— Dregei Hochst. ° 944. no. 88.
— echinulatum Mart. ° 935. no. 53.
— Ehrenbergianum Kl. 930. no. 25.
— Elychrysoides Bong. 930. no. 16.
— erythropodum Miq. (s.) 939. no. 70.
— eurypeplon Körn. ° 946. no. 97.

Eriocaulon fenestratum Boier ° 944. no. 87.
— fistulosum R. Br. ° 927. no. 2.
— flavidulum Mich. ° 928. no. 8.
— gibbosum Körn. 930. no. 23.
— gnaphalodes Mich. (s.) 929. no. 9.
— gomphrenoides Knth. 930. no. 14.
— gracile Mart. ° 941. no. 78. †
— gregatum Körn. ° 932. no. 43.
— griseum Körn. ° 930. no. 12.
— Guianense Körn. 927. no. 6.
— Hamiltonianum Mart. ° 944. no. 92.
— heterolepis Steud. ° 941. no. 76.
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— infirmum Steud. (s.) 941. no. 78.
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— Kunthii Körn. ° 930. no. 15.
— laxifolium Körn. 931. no. 30.
— leptophyllum Knth. 931. no. 31.
— leucocephalum Steud. ° 938. no. 71.
— Lhotzkyi Steud. (s.) 941. no. 77.
— linearifolium Körn. 931. no. 37.
— Luzulaefolium Mart. ° 937. no. 66. †
— macrobolax Körn. 930. no. 18.
— Martianum Wall. Cat. (s.) 939. no. 70.
— Melaleucum Mart. ° 940. no. 73. †
— melanocephalum Knth. 931. no. 38.
— Metzianum Miq. (Körn.) 942. no. 79.
— microcephalum H. B. K. 930. no. 26.
— minimum Lam. ° 937. no. 64.
— miserum Körn. ° 932. no. 40.
— modestum Knth. 930. no. 29.
— nanum R. Br. ° 934. no. 51.
— Neesianum Körn. ° 936. no. 61.
— Nepalense Bong. ° 938. no. 68.
— Nepalense Knth. (non Bong.) (s.) 938. no. 67.
— nigricans R. Br. ° 934. no. 50.
— Nilagirense Steud. ° 942. no. 81.
— odoratum Dalz. ° 945. no. 95.
— oryzetorum Mart. ° 938. no. 69. †
— pallidum R. Br. ° 937. no. 65.
— palustre Salzm. 930. no. 13.
— pellucidum Mich. (s.) 928. no. 7.
— proximum Steud. 930. no. 28.
— pulchellum Körn. ° 935. no. 57.
— pumilum Afz. (Körn.) ° 935. no. 56.
— pusillum R. Br. ° 935. no. 55.
— pygmeum Körn. 927. no. 1.
— pygmeum Dalz. (s.) 935. no. 58.
— quadrangulare Lour. (s.) 946. no. 99.
— quinquangulare L. (Körn) ° 939. n. 70.
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— quinquangulare Mart. p. p. (s.) 940. no. 72.
— rivulare Don ° 940. no. 84.
Eriocaulon rivulare Dalz. (s.) 932. no. 42.
— robustum Steud. ° 941. no. 89.
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— rosulatum Körn. ° 930. no. 22.
— Rouxianum Steud ° 936. no. 59.
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— Schiedeanum Körn. 930. no. 27.
— Sellowianum Knth. 930. no. 19.
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— setaceum Knth.; Wight; Steud. (s.) (non L. nec Lour.) 931. no. 40.
— setaceum Lour. (spec. excl.) 947.
— sexangulare L. ° 933. no. 48.
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— Sieboldianum Sieb. et Zucc. (s.) 933. no. 48. β.
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— Sollyanum Royle (s.) 940. no. 72. †
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— panduraeformis Bl. herb. L. B. (s.) 558. no. 2.
— poianthes Brot. (s.) 558. no. 1.
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— globulus Labill. 825. †
— multiflora Rich. (A. Gray) ° (sp. dubia) 825. no. 5.
— platypus Hook. ° 824. no. 1. †
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— acuminata Roxb. (s.) 835. no. 10.
— aegiceroides Korth. (Miq.) 844. no. 10.
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— amicorum A. Gray. ° 839. no. 33. †
— ? apiculata DC. 841. †
— apiculata DC. (s.) 829. no. 1.
— apiculata Hook. et Arn., Gay (s.) 829. no. 1. β.
— apiculata var. Hook. (s.) 829. no. 1. γ.
— (Syzygium) brachiata Roxb. (s.) 837. no. 25.
— Brackenridgei A. Gray ° 839. no. 30. †
— ? brevifolia A. Gray ° 839. no. 29.
— (Syzygium) Borneensis Miq. An. (s.) 835. no. 12.
— (Syzygium) Caryophyllaea Wight (s.) 836. no. 18.
— ? cerasiformis DC. (s.) 847. no. 87.
— cerasoides Roxb. 849. no. 8. †
Cheken DC. (s.) 829. no. 1.
Cheken Hook. et Arn. Gay (s.) 829. n. 1. α.
— clusiaefolia A. Gray ° 839. no. 36. †
— conferliflora A. Gray ° 838. no. 30. †

Eugenia Correaefolia Hook. et Arn. (s.) 830. no. 7.
— corymbosa Roxb. Wight (s.) 842. n. 6. †
— corynocarpa A. Gr. ° 839. no. 33. †
— Cruikshankii Hook. et Arn. (s.) 829. no. 3.
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— glandulifera Roxb. (s.) 843. no. 52.
— gracilipes A. Gr. ° 849. no. 58.
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— Kalahiensis Miq. Anal. (s.) 836. no. 18.
— (Syzygium) Korthalsiana Miq. Anal. (s.) 836. no. 14.
— (Syzygium) laevigata Miq. Anal. (s.) 836. no. 20. †
— leptospermoides Barnéoud nec DC. (s.) 830. no. 8.
— leptostemon Miq. 840. no. 5.
— leucoxylon Miq. Anal. (s.) 836. no. 15.
— lucidula Miq. ° 844. no. 9.
— microbotrya Miq. ° 849. no. 7. †
— Michelii Lam. (s.) 840. no. 1.
— (Syzygium) Mülleri Miq. Anal. (s.) 835. no. 11.
— multiflora Hook. et Arn. (s.) 829. n. 2.
— nervosa Lour. 840. 4.
— neurocalyx A. Gr. 849. no. 57. †
— obtusa DC.? (s.) 829. no. 5.
— obversa Miq. Anal. (s.) 844. no. 19.
— Pomatensis Miq. ° 841. no. 11. †
— pendula DC. 840. no. 2.
— polycephala Miq. An. (s.) 849. no. 51.
— pterocaulis Miq. Verh. (s.) 815. no. 24.
— pulchella Roxb. (s.) 844. no. 14.
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— rariflora Benth. 841. no. 12. †
— Reinwardtiana DC. (s.) 832. no. 1.
— Richii A. Gray ° 849. no. 55. †
— rubescens A. Gray ° 839. no. 34. †
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— ? Savaiensis A. Gray ° 839. no. 38.
— stenophylla Hook. et Arn. (s.) 829. n. 4.
— stipularis Miq. 840. no. 3.
— Temu Hook. et Arn. (s.) 829. no. 2.
— ? Tutuilensis A. Gray ° 839. no. 37.
— Ugni Hook. et Arn. 841. †
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— varians Miq. An. (s.) 848. no. 48.
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— ? Willdenovii (s.) 840. no. 1.
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Eugesnereae (Gesnerac. subtrib.) ° V. 408. 431.
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— campestris Lindl. 647. no. 17.
— ciliata Rchb. f. 647. no. 19.
— clavicornis Lindl. ° 645. no. 5.
— cochlearis Lindl. ° 646. no. 10.
— Dregeana Lindl. ° 644. no. 2.
— emarginata Lindl. ° 645. no. 4.
— ensata Lindl. ° 646. no. 11.
— filicaulis Lindl. ° 646. no. 14.
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— lurida Lindl. 646. no. 13.
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— maculata Rchb. f. 647. no. 18.
— macrostachya Lindl. ° 646. no. 12.
— micrantha Lindl. 646. no. 9.
— ovalis Lindl. ° 646. no. 7.
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— platypetala Lindl. ° 645. no. 3.
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— exiguum Kl. ms. (s.) 166. no. 19. β.
— Fortunei Turcz. ° 167. no. 25.
— grandifolium Regel ° 166. no. 22. †
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— Iresinoides H. B. K. 166. no. 19.
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var. β. glabrescens Steetz.
— Iresinoides DC. (s.) 166. no. 19. α.
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var. β. major Hook. °
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— involucratum β. ramosum DC. pr. (s.) 283. no. 5.
— Keriense A. Cunn. (Hook. f.) ° 282. n. 4.
var. β. linifolia Hook. °
var. γ. macrolepis Hook. °
var. δ. spathulata Hook. °
— Leontopodium Scop. 286. †
— leucocephalum A. Gray ° 284. no. 12.
— luteo-album L. 285. †
— Lyallii Hook. f. ° 282. no. 3.
— margaritaceum L. 286. †
— Norvegicum Gouan 285. †
— pilulare Wahlb. 285. †
— polycephalum A. Gr. (non Michx.) (s.) 284. no. 12.
— prostratum Hook. ° 282. no. 1.
— Rhodanthum Sch. Bip. (Seem.) ° 284. no. 14.
— roseum H. B. K. 284. no. 13.
var. α. hololeneum Benth. °
var. β. angustifolium Benth. °
var. γ. sordescens Benth.
— rupestre Raf. 286. †
— Seemanni Sch. Bip. (Seem.) ° 285. n. 15.
— sericeum Turcz. ° 283. no. 8.
— serotinum Rchb. ° 286. †
— silvaticum L. 285. †
— spathulatum Lam. ° 285. no. 12.
— spiciforme Sch. Bip. ° 283. no. 7.
— stachydifolium Lam. ? 285. no. 17.
— Stoechas L. 286. †
— supinum L. 285. †
— uliginosum L. 285. †
Gnaphalium virgatum Bks. et Sol. ms. (Hook. f.) ° 282. no. 5.
— Zollingeri Turcz. ° 283. no. 9.
Gnaphalodes A. Gr. ° V. 286.
— condensatum A. Gr. ° 286. no. 2.
— uliginosum A. Gr. ° 286. no. 1.
Gnaphalopsis micropioides DC. (s.) V. 232. n. 5.
Gnephosis Cass. V. 270. (262.)
— arachnoidea Turcz. ° 270. no. 1.
— macrocephala Turcz. ° 270. no. 2.
Gnetum L. 802.
— funiculare Bl. 802. †
Goethea Nees et Mart. IV. 303.
— cauliflora Lem. (s.) 303. no. 1. †
— strictiflora Hook. ° 303. no. 1. †
Goldfussia Nees V. 650.
— glomerata Hook. 650. no. 1.
var. α. fl. pallide lilacinis Hook.
var. β. fl. purpureis speciosis Hook. †
— glomerata Nees (s.) 650. no. 1. α.
Gomeza crispa Kl. (s.) 853. no. 91.
— foliosa Kl. (s.) 854. no. 92.
— planifolia Kl. (s.) 853. no. 89. †
— recurva R. Br. (s.) 853. no. 88. †
— tenuiflora Lodd. (s.) VI. 672. n. 4.
Gomphandra Wall. IV. 354.
— polymorpha W. et Arn. 354. no. 1.
Gomphia Schreb. IV. 421.
— decorans Lem. ° 422. no. 2. †
— linearis A. Gray ° 422. no. 3. †
— microdonta Benth. ° (non Dalz. ut erronee b. l. scriptum) 421. no. 1.
Gomphocarpus R. Br. V. 502.
— fruticosus R. Br. 502. †
Gompholobium Sm. IV. 453.
— Drummondii Meisn. 453. no. 1.
Gomphosia Wedd. V. 129.
— chlorantha Wedd. mon. Cinch.
— (Aspidanthera) laxiflora Benth. (s.) 129. no. 1. β.
— longiflora Benth. ° 129. no. 1.
α. densiflora.
β. laxiflora.
Gomphostylis Wall. (Coelogynae sect.) VI. 231.
Gongora Rz. et Pav. (Rchb.) ° VI. 590.
— Armeniaca Rchb. f. ° 593. no. 6.
— aromatica Rchb. f. ° 594. no. 8. b.
— atropurpurea Hook. ° 596. no. 15. †
— Boothiana hort. (s.) 596. no. 14.
— bufonia Lindl. ° 593. no. 7. †
— bufonia var. leucochila Lindl. (s.) 595. n. 12.
— fulva Lindl. (s.) 595. no. 12.
— galeata Rchb. f. ° 591. no. 1. †
— Galeottiana A. Rich. et Gal. ° 596. no. 16. †

Gongora Heisterii hort. (s.) 596. no. 15.
— histrionica Rchb. f. (s.) 596. no. 13.
— Jenischii hort. (s.) 596. no. 14.
— leucochila Lem. (s.) 595. no. 12. †
— macrantha Hook. (s.) 598. no. 4. †
— maculata Lindl. (s.) 595. no. 12. et 596. n. 14. †
— maculata tricolor Lindl. (s.) 594. n. 10.
— nigrita Lindl. ° 595. no. 11.
— odoratissima Lem. ° 596. no. 14. †
— quadricornis hort. (s.) 596. no. 14.
— quinquenervis Rz. et P. ° 595. no. 12.
— retrorsa Rchb. f. ° 593. no. 8.
— saccata Rchb. f. 592. no. 4.
— scaphephorus Rchb. f. 592. no. 5.
— Seideliana Rchb. f. ° 591. no. 2.
— Shepherdii hort. (s.) 596. no. 14.
— speciosa Hook. bot. m. (s.) 597. n. 1. †
— stenoglossa Rchb. f. ° 594. no. 9.
— tricolor Rchb. f. ° 594. no. 10.
— truncata Lindl. ° 592. no. 3. †
— viridi-purpurea Hook. (s.) 496. no. 2.
Goniopogon Turcz. ° V. 184.
— multicaule Turcz. ° 184. no. 1. †
Goniothalamus Bl. IV. 51.
— cardiopetalus H. et Th. ° IV. 51. no. 6.
— Gardneri Hook. et Th. ° IV. 51. no. 4.
— giganteus H. et Th. ° IV. 51. no. 9.
— Griffithii H. et Th. ° IV. 52. no. 11.
— Malayanus H. et Th. ° IV. 51. no. 5.
— salicinus H. et Th. ° IV. 51. no. 2.
— sesquipedalis H. et Th. ° IV. 51. no. 7.
— Simonsi H. et Th. ° IV. 51. no. 8.
— Thwaitesii H. et Th. ° IV. 51. no. 3.
— Walkeri H. et Th. ° IV. 51. no. 10.
— Wightii H. et Th. ° IV. 51. no. 1.
Gonolobus Richard ° V. 502.
— Cubensis A. Rich. ° 502. no. 1.
— Ottonis C. Koch et Bouché 502. no. 2.
— rostratus R. Br. 502. no. 3.
Goodenia Smith. (Vr.) ° V. 369. 379.
— acuminata Br. 382. no. 22.
— affinis Vr. ° 381. no. 19.
— Armeriaefolia Vr. ° 380. no. 8.
— Armeriaefolia Sieb. exp. 380. no. 8.
— Armstrongiana Vr. 381. no. 20. †
— barbata Br. 382. no. 29.
— bellidifolia Br. 379. no. 1.
— cistifolia A. Cunn. 383. no. 36.
— coronopifolia Br. 382. no. 34.
— cycloptera Br. 383. no. 43.
— decurrens Br. (Vr.) ° 381. no. 21. †
— elongata Labill. 382. no. 33.
— filiformis Br. 381. no. 16.
— flagellifera Vr. 382. no. 30. †
— flexuosa Vr. ° 380. no. 5.
Goodenia geniculata Br. 381. no. 18.
— genuflexa (geniculata) Vr. (s.) 381. n. 1
— glandulifera Vr. ° 380. no. 9.
— gracilis Vr. ° 380. no. 7.
— graminifolia Hook. f. 381. no. 14.
— grandiflora Sims. (Vr.) ° 382. no. 26.
— hederacea Sm. 382. no. 32. †
— heterophylla Sm. 382. no. 27.
— hispida Br. 381. no. 15.
— humilis Vr. 381. no. 12.
— incana Br. 383. no. 38. †
— junciformis Vr. (s.) 389. no. 1.
— lanata Br. 382. no. 31. †
— longifolia Vr. ° 380. no. 6.
— marginata Vr. ° 382. no. 25.
— mollis Br. 383. no. 37.
— nana Vr. ° 381. no. 13.
— ovata Sm. 382. no. 23.
— paniculata Sm. 380. no. 4.
— pinifolia Vr. ° 383. no. 45. †
— pinnatifida Schlchtd. 383. no. 47.
— primulacea Schlchtd. Vr. 383. no. 46.
— pterygosperma Vr. 383. no. 39.
— pubescens Sieb. (s.) 382. no. 27.
— pulchella Benth. in Hüg. en. (s.) 382. no. 33.
— purpurascens Br. 383. no. 48.
— pusilla Vr. 380. no. 11.
— pygmaea Vr. (s.) 389. no. 1.
— quadrilocularis Br. (s.) 385. no. 1.
— radicans DC. pr. (s.) 384. no. 2.
— radicans R. et Sch. (s.) 384. no. 1.
— repens Lab. Br. (s.) 384. no. 1.
— rigida Benth. 383. no. 44.
— rotundifolia Br. 382. 28.
— scapigera Br. (s.) 386. no. 1.
— spathulata Vr. ° 379. no. 2.
— squarrosa Vr. 383. no. 41. †
— stelligera Br. 380. no. 3.
— stolonifera Vr. 381. no. 17.
— tenella Br. 382. no. 25.
— teretifolia Vr. ° 380. no. 10.
— varia Br. 382. no. 24.
α. f. obovatis v. obovalibus.
β. f. subrotundis.
γ. f. ovalibus.
— viscida Br. (s.) 386. no. 2.
— xanthotricha Vr. ° 383. no. 42.
Goupia Aubl. IV. 427.
— glabra Aubl. var. Benth. ° 427. no. 1.
Gouffeia Robill. et Cast. IV. 259.
— arenarioides R. et C. IV. 259. †
Govenia Lindl. ° VI. 556.
— alba Rich. et Gal. (s.) 557. no. 5.
— Andrieuxii Rchb. f. ° 558. no. 8.

Govenia capitata Lindl. ° 557. no. 7. †
— deliciosa Rchb. ° 557. no. 5.
— fasciata Lindl. ° 558. no. 10.
— Gardneri Hook. ° 557. no. 6. †
— lagenophora Lindl. B. R. (s.) 556. n. 1.
— liliacea Lindl. ° 556. no. 2. †
— mutica Rchb. ° 556. no. 4.
— pauciflora Lindl. ° 556. no. 3.
— superba Lindl. ° 558. no. 9.
— tingens Endl. Poepp. ° (s.) 559. no. 10.
— utriculata Lindl. ° 556. no. 1.
Govindovia R. W. VI. 158.
— nervosa R. W. 158. †
Grabowskia Schlchtd. V. 561.
— obtusa Miers 561. †
Graffenrieda DC. IV. 782.
— excelsa DC. (s.) 783.
— jucunda Mart. (s.) 783.
— miconioides Naud. ° 783. no. 4.
— ovalifolia Naud. ° 782. no. 2.
— rotundifolia DC. 782. no. 1.
— Weddellii Naud. ° 782. no. 3.
Grahamia Gill. (A. Gr.) ° V. 7
Gramineae Juss. VI. 934.
Grammanthes DC. V. 11.
— chloraeflora Hook. 11. no. 2. †
— chloraefolia h. Benn. 11. no. 1.
— gentianoides DC. (s.) 11. no. 2.
Grammatophyllum Bl. ° VI. p. 628.
— fastuosum Lindl. (s.) 628. no. 2.
— Finlaysonianum Lindl. (s.) 630. et 882. no. 1.
— macranthum Rchb. f. ° 628. no. 2.
— multiflorum Lindl. ° 629. no. 3. †
— paludosum Griff. (s.) 648. no. 3. †
— ? pubescens Span. 630. no. 5.
— scriptum Bl. ° 629. no. 4. †
— speciosum Bl. ° 628. no. 1. †
Grangeria Commers. IV. 646.
— Borbonica Lam. 646. no. 1.
Greggia A. Gray ° IV. 208.
— camporum Gray ° IV. 209. no. 1.
Grewia Juss. IV. 380.
— Ancolana Miq. ° 331. no. 2.
— mexicana DC. (errore typographico Mexina l. c.) 331. (sub Belotia.)
— persicaefolia A. Gr. ° 330. no. 1.
— prunifolia A. Gray ° 331. no. 3.
Griffinia Gawl. VI. 60.
— Liboniana Lem. ° 60. no. 1.
Griffithella (Mniopsidis sect.) Tul. ° V. 786.
Grindelia Willd. V. 191.
— grandiflora Hook. ° 191. no. 3.
— speciosa herb. Benth. (Paxt.) ° 191. no. 1. †
Grindelia squarrosa Dun.
var. grandiflora A. Gr. ° 191. no. 2.
— Texana Scheele (s.) 191. no. 2. var. et n. 3.
Grislea Löfl. IV. 689.
— punctata Ham. (s.) 689. no. 1.
— tomentosa Roxb. 689. no. 1.
var. punctata Bl. °
Grobya Lindl. ° IV. 627.
— Amherstiae Lindl. ° 628. no. 1.
— galeata Lindl. ° 628. no. 2.
Grubbiaceae A. DC. V. 713.
Grymania salicifolia Presl Epim. (s.) IV. 646. no. 11.
Guaiacum Plum. IV. 406.
— Coulteri A. Gray ° 406. no. 1.
Guardiola H. B. (A. Gray) ° V. 213.
— Atriplicifolia A. Gray ° 213. no. 2.
— Mexicana DC. pr. 213. no. 1.
— platyphylla A. Gray ° 213. no. 4.
— Tulocarpus A. Gray ° 213. no. 3.
Guatteria acutiflora Wall. Cat. 6438 D. (s.) 77. no. 3.
— bifaria A. DC. 70. no. 4.
— biglandulosa Bl. An. 71. no. 3.
— ? caudata Wall. Cat. (s.) 62. no. 4.
— cerasoides Dun. ° 70. no. 5.
— cinnamomea Wall. Cat. 69. no. 1.
— coffeoides Thw. ° 71. no. 9.
— cordata Dun. (s.) 46. no. 6.
— Corinti Dun. 70. no. 7.
— costata Hook. et Th. 71. no. 14.
— fragrans Dalz. 69. no. 2.
— globosa A. DC. et Wall. Cat. 75. no. 6.
— Jenkinsii H. et Th. ° 70. no. 8.
— laurifolia Grah. Cat. Bomb. (s.) 50. n. 1.
— littoralis Bl. (Hassk.) 69. no. 1.
— longifolia Wall. Cat. ° 70. no. 3.
— macrophylla (s.) DC. non Bl. 53. no. 7.
— micrantha DC. (s.) 48. no. 17.
— montana DC. (s.) 48. no. 16.
— montana Moon (s.) 74. no. 1.
— multinervis Wall. C. (s.) 69. no. 1.
— nitida A. DC. 71. no. 12.
— ? pallida H. et. Th. ° 71. no. 5.
— persicaefolia H. et Th. ° 70. no. 6.
— pteropus Benth. ° 72. no. 16.
— ? ramosissima Wall. Cat. (s.) 51. no. 1.
— sesquipedalis Wall. 53. no. 7.
— simiarum Ham. in Wall. Cat. ° 71. n. 10.
— suberosa Dun. 71. no. 11.
— unonaefolia A. DC. (s.) 73. no. 2.
— velutina A. DC. et Wall. Cat. 76. no. 7.
Guatterieae H. et Th. ° IV. 63.
Guettardella Champ. ° V. 113.
— Chinensis Champ. ° 113. no. 1.

Guichenotia Gay IV. 321.
— macrantha Turcz. 321. no. 1. †
Guildingia Hook. IV. 805.
— Psidioides Hook. 805. no. 1.
Guilielma Mart. (Karst.) ° V. 821. 847.
— Granatensis Karst. ° 848. no. 3.
— insignis Mart. 821. no. 327. †
— Macana Mart. 821. no. 328.
— Piritu Karst. ° 847. no. 1.
— speciosa Mart. 821. no. 326. †
— tenera Karst. ° 847. no. 2.
Gunnera Linn. IV. 683.
— bracteata Steud. 684. no. 3.
— commutata Bl. ° 683. no. 1.
— integrifolia Bl. ° 684. no. 7.
— lobata Hook. f. 684. no. 9. †
— macrophylla Bl. 684. no. 2.
— Magellanica Lam. 684. no. 5.
— monoica Raoul 684. no. 6.
— perpensa L. 684. no. 4.
— petaloidea Gaud. (A. Gray) ° 684. n. 8. †
var. β. Kauaense A. Gray °
— plicata Vahl (s.) 684. no. 5.
— reniformis Gay (s.) 684. no. 5.
Gunneraceae Endl. IV. 683.
Gunnia picta Lindl. (s.) VI. 501. no. 32.
— australis Lindl. (s.) 501. no. 33.
Gurania Schlchtdl. ° (Anguriae sect.) IV. 855.
Gurltia Klotzsch ° IV. 896. †
— Boucheana Kl. ° 897. no. 4.
— Meyeri Kl. ° 896. no. 3.
— rigida Kl. ° 896. no. 2.
— tomentosa Kl. ° 896. no. 1.
Gustavia alata Spanoghe (s.) 852. no. 2.
— globosa Spanoghe (s.) 852. no. 2.
— valida DC. (s.) IV. 852. no. 1.
Guthnickia Reg. ° V. 406. 414. 422. †
— atrosanguinea Reg. (s.) 422. no. 2.
— foliosa Hanst. ° 422. no. 1.
— Mimuliflora Reg. ° 422. no. 1.
Gutierrezia Lag. V. 234.
— Alamani Gray ° 234. no. 1.
— Baccharoides Schultz Bip. ° 235. no. 5.
— ? gymnospermoides Gr. ° 234. no. 3.
— Haenkei Schultz Bip. ° 235. no. 4.
— Wrightii Gr. ° 234. no. 2.
Guzmannia Rz. et Pav. VI. 95.
— tricolor R. et Pav. 95. †
Gymnacanthus Oerd. ° V. 639.
— campestris Oerd. ° 639. no. 2. †
— geminiflorus Oerd. 639. no. 3.
Gymnacanthus humilis Oerd. 639. no. 1.
— Schlechtendalianus Oerd. 639. no. 1. †
Gymnocarpeae Klotzsch ° IV. 53.
Gymnomesium Schott ° V. 867.
— pictum Schott ° 867. no. 1.
Gymnopsis DC. V. 220.
— ? Costaricensis Benth. ° 220. no. 2.
— Vulcanica Steetz ° 220. no. 1.
Gymnosperma Less. V. 191.
— eriocarpa A. Gray ° 191. no. 1.
GYMNOSPERMEAE Schleiden V. 794.
Gymnostachyum Nees V. 646.
— Ceylanicum W. Arn. 646. †
Gymnostichum Schreb. VI. 1051.
— gracile Hook. f. ᵇ 1051. no. 1 †
Gymnothrix Palis. VI. 958.
— chilensis Em. Desv. ° 959. no. 2. †
— elegans Büse ° 958. no. 1.
— paupera Nees ms. (s.) 961. no. 1.
Gynandrae Endl. VI. 167.
Gynandriris Parl. ° VI. 45.
— Sisyrinchium Parl. 46. no. 1.
Gynandropsis DC. IV. 223.
— speciosa DC. ° IV. 223. no. 1.
Gynotroches Bl. IV. 674.
— Dryptopetalum Bl. (s.) 674. no. 1.
— reticulata A. Gray ° 674. no. 1.
Gynoxis Cass. V. 296.
— auriculata Turcz. ° 296. no. 3.
— Cummingii Benth. ° 297. no. 4.
— heterophylla Turcz. ° 296. no. 2.
— Oerstedii Benth. ° 297. no. 5.
— Prenanthifolia Turcz. ° 296. no. 1.
Gynura Cass. V. 291.
— affinis Turcz. ° 291. no. 1.
— dichotoma Turcz. ° 291. no. 3.
— Lobbiana Turcz. ° 291. no. 4.
— scabra Turcz. ° 291. no. 2.
Gypsophila L. IV. 276.
— Hispanica Willk. ° IV. 276. no. 1. †
— perfoliata L. β. tomentosa DC. IV. 276. no. 3. †
— Struthium L. IV. 276. no. 2. †
— Struthium Asso, non L. (s.) IV. 276. no. 1.
Gyrandra Wall. Cat. IV. 437.
Gyrostemon Hook. f. V. 742.
— Acaciaeformis Ferd. Müller ° 742. no. 2.
— pyramidalis Ferd. Müller ° 742. no. 1.
Gyrostephium Turcz. ° V. 273.
— rchizocephalum Turcz. ° 273. no. 1.

H.

Haagea Klotzsch ° IV. 920. °
— dipetala Kl. ° 921. no. 1.
Habracanthus Nees (Oerst.) ° V. 659.
— silvaticus Nees ° 659. no. 1.
Habrothamnus Endl. V. 590.
— aurantiacus Regel 590. no. 2. †.
(Cestrum Regelii Planch.)
— Hügelii hort. 590. no. 1. †
Habzelia A. DC. IV. 61.
— ferruginea H. et. Th. ° IV. 61. no. 1.
— oxyantha H. et Th. ° IV. 61. no. 2.
Haemadictyon Lindl. V. 497.
— exsertum DC. ° 497. no. 1.
Haemanthus L. VI. 60.
— insignis Hook. 60. no. 1. †
Haematoxylon L. IV. 594.
— Campechianum L. 594. no. 1.
Haemodoraceae R. Br. VI. 96.
Haemodorum Smith VI. 96.
— distichophyllum Hook. ° 96. no. 1. †
Halanthium C. Koch. V. 738.
Halimocnemis C. A. Mey. V. 738. 740.
— Kowalenskyi Stschegl. 740. no. 1.
Halleria L. V. 621.
— Abyssinica Jaub et Sp. ° 621. no. 1. †
— lucida A. Rich. fl. Abyss. (s.) 621. no. 1.
— lucida Benth. (quoad pl. Abyss.) (s.) 621. no. 1.
Halmyra Parl. ° VI. 62.
— stelleria Parl. ° 62. no. 1.
Halocharis Moq. V. 738.
Halocnemum M. B. (Bge.) ° V. 733.
Halogeton Bge. ° V. 738.
— acutifolius Bge. ° 738. no. 1.
— arachnoideus Moq. (s.) 739.
— malacophyllus Bge. ° 738. no. 2.
— oppositifolia C. A. M. fl. Alt. (s.) 739. n. 1.
Halorageae R. Br. IV. 683.
Haloragis Forst. 683.
— filiformis A. Gr. ° 683. no. 1.
— pinnatifida A. Gr. ° 683. no. 2.
Halostachys C. A. Miq. (Bge.) ° V. 733.
Haloxylon Bunge ° V. 738.
— ammodendron Bge. ° 739. no. 1.
— articulatum Bge. ° 739. no. 2.
Hamamelidaceae Gardn. IV. 488.
Hansteinia Oerd. ° V. 640.
— gracilis Oerd. ° 640. no. 1. †
Hapalocarpum Bl. ° (Ammaniae sect.) IV. 687.
Haplodon Naud. ° (Clidemiae subsect.) IV. 765.
Haplopappus Cass. V. 193.
(Aplopappus DC. pr.)
— Blepharíphyllus A. Gr. ° 193. no. 2.
— hypoleucus Turcz. ° 193. no. 1.
— laricifolia A. Gr. ° 193. no. 3.
Haplopetalon A. Gray ° IV. 674.
— Richii A. Gray ° 674. no. 1. †
Haplophylloxys Planch ° (Oxalis sect.) IV. 400.
Haplostemmae (Asclepiadear. divisio) ° V. 500.
Hardwickia Roxb. IV. 612.
— binata Roxb. 612. no. 1.
— pinnata Roxb. 612. no. 2.
Harina Ham. (Wallichiae Roxb. sectio) ° V. 811.
Hartigia oblongifolia Miq. (s.) 717. no. 56.
— spectabilis Miq. (s.) IV. 717. n. 56.
Hartighsea sp. Juss. (Didymochiton Bl.) (s.) IV. 387.
Hartwegia Lindl. ° VI. 445.
— purpurea Lindl. ° 445. no. 1.
var. angustifolia Lindl. l. c. °
Hebecladus Miers V. 571.
— biflorus Miers 571.
— mollis Miers 571. †
— umbellatus Miers 571.
— viridiflorus Miers 571. (sub Atropa)
Hebeclinium DC. V. 162.
— ianthinum Hook. ° 162. no. 1.
— macrophyllum DC. pr. 163. no. 2.
Hedera L. V. 84.
— Gaudichaudii A. Gr. ° 84. no. 1. †
var. β A. Gr. °
— glomerulata DC. pr. 85. no. 5.
— parviflora Champ. ° 84. no. 3.
— platyphylla A. Gr. ° 84. no. 2. †
— protea Champ. ° 84. no. 4.
Hedwigia Swartz IV. 450.
— rhoifolia Benth. ° 450. no. 1.
Hedycapnos Planch ° (Capnorchidis subgen.) IV. 177.
Hedycarya Forst. (Tul. °) IV. 111.
— angustifolia (s.) Cunningh. IV. 112. no. 2.
— arborea Forst. (s.) IV. 112. no. 1.
— (?) Bengalensis Roxb. (s.) IV. 113. n. 4.
— Cunninghami Tul. ° IV. 112. no. 2.
— dentata Tul. ° IV. 112. no. 1.
— dentata et scabra Cunningh. (s.) IV. 112. no. 1.
— (?) hirsuta Spr. ° IV. 113. no. 4.
— macrophylla All. Cunn. (s.) IV. 109. n. 23.

Hedycarya racemosa Tull ° IV. 118. no. 3.
Hedychium Kön. (Wall.) ° VI. 22.
— acuminatum Rosc. (s.) 24. no. 5. γ. †
— angustifolium Wall. ° 25. no. 14. β.
— angustifolium Roxb.; Corom. pl. (s.) 26. no. 15. †
— aurantiacum Rosc. (s.) 25. no. 14.
— carneum Rosc. (s.) 26. no. 15.
— carnuum bot. mag. (s.) 26. no. 15. β.
— cerneum Wight (s.) 24. no. 6. †
— coccineum bot. Cab. (s.) 25. no. 14.
— coronarium Roxb. (Wall.) ° 22. no. 1. †
β. fl. lutescentib. †
γ. fl. intense luteis †
δ. statura fl. maximis.
ε. f. angustis. spicis abbreviatis Bl.
ζ. f. infra sericeis. Bl.
— densiflorum Wall. ° 24. no. 9.
— elatum Br. (s.) 26. no. 15. β.
— ellipticum Ham. (Wall.) ° 23. no. 3.
— fastigiatum Wall. Cat. (s.) 23. n. 3.
— flavescens Lindl. (s.) † 25. no. 13.
— flavum Roxb. (Wall.) ° 23. no. 2. †
— Gardnerianum Wall. ° 25. no. 12. †
β. labello suborbiculato †
γ. labello subquadrato †
— glaucum Rosc. (s.) 24. no. 8.
— Gomezianum Wall. ° 25. no. 10.
— gracile Roxb. (Wall.) ° 24. no. 8. †
— Griffithianum Wall. ° 25. no. 11.
— Hasseltii Bl.; Wall. ° 26. no. 16.
— heteromallum bot. reg. (s.) 23. no. 4.
— Horsfieldii Wall. ° 28. no. 23.
— intermedium Bl.; Wall. 26. 17.
— lingulatum Hassk. Wall. 27. no. 20.
— longifolium Rosc. (s.) 26. no. 15.
— Roxburghii Bl.; Wall. ° 27. no. 19.
β. spicis densiorib.
— Roxburghii Sieb. (s.) 25. no. 13.
— scaposum Nimmo, Grah. (Wall.) ° 27. no. 20.
— Sieboldii Wall. ° 25. no. 13.
— simile Bl.; Wall. ° 26. no. 18.
— Spanogheanum Wall. ° 27. no. 1.
— speciosum Wall. in Roxb. et alior. (s.) 25. no. 1.
— spicatum Wall. ° 24. no. 5. †
β. trilobum Wall. °
γ. acuminatum Wall. °
— stenopetalum bot. Cab. (s.) 26. n. 15. β.
— thyrsiforme Wall. ° 23. no. 4.
— trilobum Wall. (s.) 24. no. 5. β.
— venustum Wight (Wall.) ° 24. no. 6. †
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— acutangula ° Champ. 116. no. 1.
Hedyotis Borrerioides Champ. ° 116. no. 1
— humifusa Gray pl. Lindh. p. 61. (s.) 117. no. 2.
— humifusa Gray pl. Lindh. 2. p. 214. (s.) 117. no. 3.
— Lowsoniae ? Benth. (non W. et Arn.) (s.) 116. no. 1.
— recurva Benth. (s.) 116. no. 1.
— stenophylla var. parviflora Gray (s.) 117. no. 4.
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— minutissima Bge. ° 818. no. 1.
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— Kolenatii C. Koch ° 545. no. 2.
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— brevipes Boiss. et R. ° IV. 231. no. 1.
— canum Dun. (s.) IV. 232. no. 4. ε.
— Fontanesii B. et Reut. ° IV. 231. no. 1.
— fumana Mill. (s.) IV. 230. no. 1.
— fumana var. β. DC. (s.) IV. 230. no. 2.
— Italicum Pers. (s.) IV. 232. no. 4. β.
— Italicum Rchb. ic. (s.) IV. 232. n. 4. γ. †
— montanum Vis. ° IV. 231. no. 4.
var. α. Oelandicum Vis. ° IV. 231. no. 4. α.
var. β. Italicum Vis. ° IV. 232. no. 4. β.
var. γ. Reichenbachii Vis. ° IV. 232. no. 4. γ. †
var. δ. acutifolium Vis. ° IV. 232. no. 4. δ. †
var. ε. tomentosum Vis. ° IV. 232. no. 4. ε.
— Oelandicum DC. (s.) IV. 231. n. 4. α.
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β. sericeum.
γ. hispidum.
δ. Eichwaldi.
ε. Jaxartinum.
ζ. scoparium.
— dasycarpum Ledeb. (s.) 544. no. 9. δ.
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— longiflorum Hochst. et Steud. 542. n. 1. †
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— ? Brasiliensis Casar. 778. no. 6. et 809. no. 1.
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β. rigida Desv. °
γ. humilis Desv. °
— cylindricum Steud. (s.) 1053. no. 7.
— divergens Nees (s.) 1053. no. 7.
— enclaustum Steud. 1052. no. 5.
— Ithaburense Boiss. ° 1052. no. 1.
— jubatum Hook. f. ° (s.) 1053. no. 7. (non L. nec Knth.)
— pratense Huds. 1052. no. 2.
β. Lange. °
— pusillum Nutt. (s.) 1052. no. 5.
— Riehlii Steud. (s.) 1052. no. 5.
— trifurcatum Jacq. 1052. no. 4.
— violaceum Boiss. et Hoh. ° 1052. n. 2. †
Horkelia Cham. et Schlchtd. IV. 664.
— Gordoni Hook. 664. no. 1. †
Hormidium (Epidendri subg.) Lindl. VI. 310. et 346.
Hortonia Wight ° IV. 115.
— acuminata Wight (s.) IV. 115. no. 1.
— floribunda Wight (Tul.) ° IV. 115. n. 1. †
var. acuminata Hook. et Th. IV. 115. no. 1. †
— floribunda (s.) var. ovalifolia H. et Th. ° IV. 115. no. 2.
— ovalifolia Wight (Tul.) ° IV. 115. n. 2. †
Hosackia Dougl. IV. 477.
— argophylla A. Gray ° 477. no. 2.
— Wrightii A. Gray ° 477. no. 1.
Hottonia L. V. 472.
— palustris L. 472. †
— serrata Willd. (s.) VI. 8. no. 1. α.
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— Brocklehurstiana Lindl. 615. no. 1.
— Landsbergii Lind. Rchb. f. ° 617. no. 5.
— odoratissima Lind. et Paxt. ° 616. n. 2.
— picta Lind. et Rchb. ° 616. no. 2.
— tigrina Lind. ° 617. no. 4.
— vittata Lindl. Bot. R. (s.) 616. no. 3.

Houttea Decsne ° V. 409. †
— pardina Decsne. 409.
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— stricta Meisner β. major Meisn. ° 458. n. 2.
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— grandiflora Wedd. ° 130. no. 3.
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— Cumingiana Decsne. 506. †
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— imperialis Lindl. var. Rauschii Reg. 506. †
— lacunosa Decsne 506. †
— Motoskei Teysm. et B. ° 505. no. 3.
— picta var. argentea (s.) 506. no. 4.
— picta var. aurea (s.) 506. no. 4.
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— floribundum Mart. ° 384. no. 3.
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— macrophyllum Benth. ° 384. no. 10.
— montanum A. Juss. 384. no. 4.
— oblongifolium Benth. ° 385. no. 12.
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— parvifolium A. Juss. (s.) 384. no. 3.
— subcrenatum Benth. ° 384. no. 7.
— Surinamense Miq. (s.) 384. no. 2.
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— cerina Lindl. (s.) 651. no. 2.
— fimbriata h. Hamb. nom. (s.) 657. n. 13.
— imbricata hort. Hamb. (s.) 658. no. 4.
— Meleagris Lindl. (s.) 555. no. 4.
— Meleagris bot. reg. (s.) 652. no. 4.
— sessiliflora Batem. (s.) 651. no. 1.
— violacea Lindl. (s.) VI. 650. no. 1.
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— Auerswaldii Willk. ° IV. 212. no. 1.
— reticulata Griseb. ° IV. 212. no. 2.
— ? Tasmanica Hook. ic. ° IV. 213. n. 4. †
— Tibetica Th. ° IV. 213. no. 3. †
Huttia J. Drumm ° IV. 37.
— conspicua J. Drumm ° IV. 38. no. 1.
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— rubricaulis Kl. ° 874. no. 2.
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— nanus R. et Schulte ° VI. 110. no. 1. †
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— spicatus Sm. (s.) VI. 116. no. 1.
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— dentata Casp. (s.) VI. 8. no. 1.
— Dregeana Presl (s.) IV. 14. no. 1.
— muscoides Planch. (s.) IV. 14. no. 1.
— najadifolia Zoll. et Mor.; Miq. (s.) VI. 9. no. 1. η.
— ovalifolia Rich. ex p. (s.) VI. 8. no. 1. α. et β.
— verticillata Casp. VI. 8. no. 1.
  α. Roxburghii Casp. ° VI. 8. no. 1.
  β. brevifolia Casp. ° VI. 8. no. 1.
  γ. tenuis Casp. ° VI. 8. no. 1.
  δ. gracilis Casp. ° VI. 9. no. 1.
  ε. crispa Casp. ° VI. 9. no. 1.
  ζ. inconsistens Casp. ° VI. 9. no. 1.
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  var. β. compacta Hook. f. °
— podantha Molkb. ° 58. no. 5.

Hydrocotyle splendens Zoll. no. 894. (s.) 58. no. 1.
— trachycarpa Ferd. Müll. ° 58. no. 4.
— Zollingeri Molkb. ° 58. no. 1.
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— submersus Hassk. (s.) VI. 9. no. 1. †.
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— Goudotiana Juss. 774. no. 5.
— imbricata Juss. 774. no. 2.
— multifida Juss. 774. no. 4.
— plumosa Juss. 774. no. 6. †
— verruculosa Juss. 774. no. 1. †
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— secundiflorus J. et Spach ° 685. n. 2. †
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— aureum Lour. (s.) 359. no. 14.
— biflorum Choisy (s.) 360. no. 17.
— bracteatum Don pr. (s.) 359. no. 5.
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— cordifolium Choisy (s.) 359. no. 5.
— coriaceum Bl. Bidr. (s.) 360. no. 20.
— Coris Schloss. non L. (s.) 357. no. 2.
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var. γ. divaricatum Bl. °
var. δ. obtusifolium Bl. °
var. ε. flaccidum Bl. °
— gnidioides Seem. ° 856. no. 9. †
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— Javanicum Bl. Bidr. (s.) 360. no. 18.
— Japonicum Thunb. (s.) 360. no. 1.
— Japonicum Don (s.) 360. no. 2.
— Japonicum Bl. Bidr. (s.) 360. no. 3.
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— nervosum Choisy ° 358. no. 4.
— oblongifolium Choisy (s.) 358. no. 1.
— olympicum Blanco (haud. L.) (s.) 362. n. 1.
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— coriacea Gaertn. 815. no. 184.
— crinita Gaertn. 815. no. 185.
— Petersiana Klotzsch in litt. Mart. 815. no. 186.
— Thebaica Mart. 815. no. 183. +
— Thebaica Knth. (s.) 815. no. 185.
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— gracilis Hook. bot. mag. (s.) 410. + (non Mart.)
— hirsuta Mart. 411. +
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— latifolia Hook. ° 98. no. 2. +
— leptostachya R. W. 98. +
— pauciflora R. W. 98. +
— Rooperii Moore ° 98. no. 1. +
— stellata L. f. 98. +
— trichocarpa R. W. 98. +
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— nitida Miers ° IV. 136. no. 1.
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— Nicaraguensis Oerst. ° 669. no. 2.
— subverticillata Andr. ° 669. no. 4.
— Viejensis Oerst. ° 669. no. 3.
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var. ε. alpina Bge. ° 678. no. 1.

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— integrifolia Lam. 573. +
Jaboroseae Miers ° V. 569.
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— macrocalyx Meisn. ° 454. no. 2.
— stricta Meisn. ° 454. no. 4.
— ulicina Meisn. ° 454. no. 3.
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— prostrata Hombr. (s.) V. 456. no. 1.
— volubilis Hombr. (s.) 456. no. 1.
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Jambosa Rumph. IV. 841.
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— acutata Miq. ° 846. no. 34.
— alba Rumph 842. no. 3.
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var. β. ambigua Miq.
var. γ. Timorensis Miq.
— ambigua Bl. (s.) 842. no. 3. β.
— appendiculata Bl. (s.) 845. no. 24.
— aquea Rumph 844. no. 18.
var. obversa Miq. °
Jambosa aromatica Miq. 848. no. 48.
— attenuata Miq. 848. no. 49.
— bifaria Wight 844. no. 15.
— Borneensis Miq. ° 847. no. 40.
— bracteata Miq. ° 848. no. 48.
— calophylla Miq. ° 844. no. 16.
— cauliflora DC. 849. no. 53.
— cerasiformis Hassk. 847. no. 37.
— clavata Korth 847. no. 39.
— coarctata Bl. (s.) 843. no. 7.
— condensata Miq. ° 846. no. 9.
— ? conferta Korth. 847. no. 41.
— confusa Bl. (s.) 845. no. 20. β.
— corymbosa Miq. 843. no. 10.
— costata Miq. ° 842. no. 5.
— ? cuspidata Bl. 847. no. 45.
— densiflora DC. 842. no. 6.
β. divaricata Bl. °
var. γ. Miq. °
— firma Miq. ° 845. no. 25.
— formosa Wght. 842. no. 1.
β. ternifolia Miq. ° 842. no. 1.
— glandulifera Miq. 849. no. 52.
— gracilipes A. Gray ° 849. no. 56.
— Horsfieldii Miq. ° 843. no. 11.
— inophylla Miq. 847. no. 38.
— insignis Bl. (s.) 845. no. 21.
— Klampok Miq. ° 843. no. 12.
— Korthalsii Bl. (s.) 845. no. 20.
— lanceolata Korth. (Miq.) ° 844. no. 20.
— lanceolata Korth. pr. p. (s.) 845. n. 21.
— lancifolia Miq. ° 845. no. 22.

Jambosa latifolia Miq. 843. no.
— macrocarpa Wght. 848. no. 7.
— Madagascariensis Bl. (s.) 844. no. 18.
— mappacea Korth. (s.) 842. no. 1.
— ? marginata Miq. 845. no. 28.
— maritima Miq. 847. no. 44.
— melanocarpa Miq. ° 846. no. 29.
— melanosticta Miq. ° 846. no. 32.
— melastomaefolia Bl. (s.) 844. no. 17.
— neurocalyx A. Gr. ° 849. no. 57. †
— Palembanica Bl. (s.) 844. no. 19. β.
— polycephala Miq. ° 849. no. 54.
— polyneura Miq. ° 842. no. 4.
— pulchella Miq. ° 844. no. 14. †
— quadrangulata A. Gr. ° 849. no. 56.
— rhynchophylla Miq. 845. no. 26.°
var. β. Miq.
— Richii A. Gr. ° 849. no. 55. †
— rostrata Miq. ° 848. no. 47.
— rubricaulis Miq. ° 846. no. 33.
— saligna Miq. ° 846. no. 35.
— Samarangensis DC. (s.) 842. no. 3. γ.
— sexangulata Miq. ° 844. no. 17.
— ? splendens Miq. 847. no. 43.
— Sumatrana Miq. 843. no. 8.
— synphytocarpa Korth. 845. no. 27.
— syzygioides Miq. 846. no. 34.
— tenuicuspis Miq. 846. no. 30.
— tenuiramis Miq. ° 848. no. 50.
— tetraquetra Miq. ° 847. no. 36.
— Teysmanni Miq. 845. no. 24.
— Timorensis Bl. (s.) 842. no. 3. γ.
— ? trifida Miq. 847. no. 42.
— virens Miq. 845. no. 22.
— Vrieseana Miq. ° 844. no. 18.
— vulgaris DC. 844. no. 19.
β. Palembanica Miq. °
— Zollingeriana Miq. ° 842. no. 2.
Jantha pallidiflora Hook. (s.) VI. 684. n. 3.
Janthe Bigulifolia Griseb. (s.) V. 645. n. 8.
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— glaucescens Boiss. ° IV. 202. no. 1.
— granatensis Boiss. et R. ° IV. 203. n. 4.
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— polycarpa Karst. ° 839. no. 1.
Iguanura Bl. V. 814.
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— Beischleriana Goepp. ° 430. no. 8.
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— graciliflora Champ. ° 429. no. 3.
— Japonica Thunb. (s.) 132. no. 1.
— latifolia hort. Sieb. et Zucc. 431. n. 3. γ
— memecylifolia Champ. ° 430. no. 3.
var. β. nummularia Benth. °
var. γ. oblongifolia Benth. °
— parviflora Benth. ° 429. no. 2.
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— ? biglandulosa Moon Cat. (s.) 399. n. 4.
— candida Lindl. 399. no. 7. †
— cornigera Hook. ° 398. no. 1. †
— fasciculata Hook. ° 399. no. 5. †
— ? grandis Heyne in Wall. Cat. (s.) 399. no. 6.
— Hookeriana Arn. 399. no. 8. †
— macrophylla Gardn. (Hook.) ° 398. n. 2. †
— pulcherrima Dalz. 399. no. 4. †
— ramosissima Dalz. ° 399. no. 3.
— Roylei Walp. 399. no. 8. †
— setacea Walp. rep. (s.) 399. no. 5.
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— angulosa Edgew. ° 487. no. 3.
— canescens Lam. (s.) 488. no. 9. γ.
— Celebica Miq. ° 488. no. 8.
— Costaricensis Benth. ° 487. no. 2.
— Lechenaultii DC. (s.) 488. no. 9.
— linifolia Retz. 488. no. 10.
α. var. f. angustissimis.
β. var. f. obovatis.
γ. brevifolia.
— Moluccana DC. (s.) 488. no. 8.
— Obrajillensis A. Gray ° 486. no. 1.
— sphaerocarpa A. Gray ° 487. no. 5.
— Timorensis DC. (s.) 488. no. 9. δ.
— trifoliata Lin. (Miq., Benth.) 488. n. 9.
α. angustata.
β. multicaulis.
γ. canescens.
δ. Timorensis.
— venulosa Champ. ° 487. no. 6.
— Zollingeriana Miq. ° 487. no. 7.
Inga Mart. IV. 635.
— bigemina Bl. Cat.; Hassk. Cat. (s.) 637. no. 6.
— Dariensis Seem. ° 636. no. 3. †
— elliptica Bl. C. (s.) 637. no. 9.
— monilifera DC. (s.) 636. no. 3.
— Oerstediana Benth. (Seem.) ° 635. n. 1.
— Panamensis Seem. ° 635. no. 2.
— purpurascens Bl. (s.) 631. no. 19. β.
— subfalcata Zoll. (s.) 638. no. 12. β.
— Tengerensis Zoll. (s.) 631. no. 12.
— trapeziformis Bl. (s.) 636. no. 11.
Intsia Pet. Th. IV. 610.
— Amboinensis Thouars 610. no. 1.
(conf. Macrolobium.)
— ? Amboinensis DC. ? (s.) 604. no. 1.
Inula Grtn. (Reichb.) ° V. 200.
— bifrons L. 200. †
— Britannica L. 200. †
— candida Cass. 200.
α. verbascifolia DC. †
β. limonifolia DC. †
— Conyza DC. pr. 200. †
— Crithmoides L. 200. †
— ensifolia L. 200. †
— germanica L. 201. †
— graveolens Desf. (s.) 201. no. 1.
— Helenium L. (s.) 202. no. 1.
— hirta L. (s.) 200. †
— hybrida Baumg. 201. †
— linearifolia Turcz. ° 201.
— macrolepis Bge. ° 201.
Inula media Biberst 201. †
— montana L. 200. †
— oculus-Christi L. 200. †
— Pulicariaeformis DC. pr. (s.) 202. no. 2.
— salicina DC. pr. 200. †
— semiamplexicaulis Reut. (s.) 201. †
— squarrosa L. 200. †
var. tenuis Rchb. ° †
— suaveolens Jacq. 200. †
— Vaillanti Vill. 200. †
— Vaillantii Vis. stirp. Dalm. (s.) 200. †
— viscosa Ait. (s.) 201. no. 2.
Jochroma Benth. V. 573.
— grandiflora Benth. (s.) 573.
— lanceolata Miers 574. †
— longipes Miers 574. †
— Warscewiczii Reg. ° 573. no. 1. †
Jochromeae Miers ° V. 569.
Jone Lindl. ° VI. p. 635.
— bicolor Lindl. ° 637. no. 6. †
— candida Lindl. ° 637. no. 7.
— cirrhata Lindl. ° 635. no. 1.
— fusco-purpurea Lindl. ° 636. no. 4.
— Khasiana Lindl. ° 636. no. 5.
— paleacea Lindl. ° 636. no. 4.
— virens Lindl. ° 636. no. 2.
Jonesia Roxb. IV. 609.
— Asoca Roxb. 609. no. 1. †
— Asoca Zoll. (s.) 609. no. 2.
— confusa Hassk. ° 609. no. 2.
— declinata Jack (Hassk.) ° 609. no. 3.
— minor Zoll. (s.) 610. no. 2.
— monopetala Hassk. ° 610. no. 4.
Jonidium Vent. IV. 234.
— hexaspermum Dals. ° IV. 234. no. 1.
— lineare Torr. var. stip. majusculis IV. 234. no. 2.
var. platyphyllum IV. 234. no. 2.
Jonopsis H. B. K. ° VI. 683.
— brevifolia Rich. et Gal. ° 684. no. 4.
— Gardneri Lindl. ° 685. no. 7. †
— pallidiflora Lindl. ° 684. no. 3. †
— paniculata Lindl. ° 685. no. 8. †
— pulchella H. B. K. ° 685. no. 6. †
— satyrioides Rchb. f. ° 686. no. 1.
— tenera Lindl. (s.) 684. no. 5. †
— teres Lindl. ° 684. no. 2. †
— testiculata Lindl. (s.) 683. no. 1. †
— utricularioides Lindl. ° 684. no. 5. †
— zonalis Lindl. ° (s.) 684. no. 5.
Josepha augusta Vell. Fl. fl. (s.) V. 721, no. 1.
Josephia Wight ° VI. 924.
— lanceolata Wght. ° 924. no. 1. †
— latifolia Wght. ° 924. no. 2. †

Jossinia Commers. IV. 882.
— lucida Decsne non DC. (s.) 882. no. 1.
— orbiculata DC. (s.) 882. †
— Reinwardtiana Bl. 882. no. 1.
Ipomoea L. V. 582.
— ? argentifolia A. Rich. 583. no. 4.
— Chilensis A. Br. et Bouché ° 583. n. 5.
— Galopagensis Ands. ° 582. no. 2.
— Kinbergi Ands. ° 582. no. 1.
— oblongata DC. pr. 583. †
— palmata Forsk. 583. †
— Purga Wender. 582. no. 6.
— rhyncorhiza Dals. ° 582. no. 3.
— tuberosa Lin. p. oligantha Hassk. ° 583. no. 7.
Iresine Br. V. 725.
— ? gossypiantha Rich. ° 725. no. 1.
Iriartea Rz. et Pav. V. 810. 887.
— deltoidea Rz. et P. 811. no. 110. †
— exorrhiza Mart. 810. no. 106. †
— Lamarckiana Mart. 811. no. 111. †
(cfr. Deckeria phaeocarpa Karst.)
— Orbigniana Mart. 811. no. 108. †
(cfr. Socratea Orbigniana Karst.)
— phaeocarpa Mart. 811. no. 9. †
(cfr. Deckeria phaeocarpa Karst.)
— praemorsa Klotzsch 811. no. 112.
— pubescens Karst. ° 887. no. 1.
— setigera Mart. 811. no. 113. †
— ventricosa Mart. 811. no. 107. †
(cfr. Deckeria ventricosa Karst.)
Irideae R. Br. VI. 42.
Iris L. (Parl.) VI. 53.
— bicolor Lindl. (s.) 47. no. 2. †
— Capensis Burm. (s.) 47. no. 1.
— Dieriackii h. Berol. ° 55. no. 7.
— edulis L. f.; Thunb.; W. (s.) 47. no. 1.
— falcifolia Bge. ° 54. no. 4.
— filifolia Bge. ° 54. no. 4.
— fugax Ten. (s.) 46. no. 1. †
— Italica Parl. ° 58. no. 1.
— Junonia Sch. et Kotschy ° 55. no. 9.
— longifolia Schseev. (s.) 47. no. 1.
— neglecta Parl. ° 54. no. 3.
— Persica L. 56. †
— pumila L. 54. no. 2.
— pumila Savi (s.) 53. no. 1.
— Sibirica L. 56. †
— Sisyrinchium L. (s.) VI. 46. no. 1.
— Sogdiana Bge ° 54. no. 6.
— stylosa Poir. var. angustifolia Boiss. et Heldr. ° 56. no. 11.
— suaveolens Boiss. et H. ° 56. no. 12.
— subbarbata Iso. ° 56. no. 10.
— triflora Balb. 56. no. 13.
Iris trigonocarpa A. Br. et Bouché ° 55. no. 8.
— Xiphium L. 56. †
Irocouna Guianensis Aubl. (s.) IV. 488. n. 1.
Isachne R. Br. VI. 957.
— australis Br. (s.) 951. no. 18.
— firmula Büse ° 957. no. 2.
— monticola Büse ° 957. no. 1.
Isanthium (Odontoglossi sect.) ° VI. 500.
Isatideae DC. IV. 215.
Ischaemum L. VI. 1072.
— muticum Retz β. erectum Büse ° 1072. no. 1.
Ischarum Bl. (Sch. et Kotschy) ° V. 886.
— eximium Sch. et Kotschy ° 886. no. 1.
Ischurochloa Büse VI. 1045.
— floribunda Büse ° 1045. no. 2.
— spinosa Büse ° 1045. no. 1.
Ischyranthera laevigata Steud. (s.) IV. 781. no. 1.
Iseilema Ands. ° VI. 1062.
— arguta Ands. ° 1063. no. 3.
— Mitchellii Ands. ° 1063. no. 4.
— prostrata Ands. ° 1062. no. 1.
— Wightii Ands. ° 1062. no. 2.
Ismene Salisb. VI. 62.
— Amancaes Lindl. 62. no. 1. †
— crinifolia Salisb. (s.) 62. no. 1.
Isochilus Rchb. f. ° VI. 447.
— carnosiflorus Lindl. 448. no. 5.
— cernuus Lindl. (s.) 399. no. 303. †
— crassiflorus Rich. et Gal. ° 448. no. 3.
— dubius ? Rich. et Gal. ° (s.) 452. no. 8.
— elegans Focke (s.) 402. no. 316.
— graminifolium H. B. K. (exp.) (s.) 538. 539. no. 110. et no. 109.
— graminifolium H. B. K. exp. (s.) 538. no. 111.
— grandiflorum Lindl. ° (s.) 540. no. 114.
— latibracteatus Rich. et Gal. ° 448. n. 4.
— linearis R. Br.; Rchb. 447. no. 1.
— lividum Lindl. bot. Reg. ° (s.) 452. n. 8.
— major Schlechtd. 447. no. 2.
— proliferum R. Br. (s.) 454. no. 13.
— ramosum Spreng. (s.) 398. no. 305.
— ramosum Focke (s.) 399. no. 306.
Isoetopsis Turcz. ° V. 165.
— graminifolia Turcz. ° 165. no. 1. †
Isoglossa Oerd. ° V. 642 †
(Rhytiglossae ex p.)
Isoloma hirsutum Reg. (s.) V. 497.
Isonandra R. Wght. V. 476.
— Gutta Hook. var. oblongifolia Vr. 476. no. 1. †
— polyandra Wight (s.) 478. no. 1.

Isopterygeae Klotzsch ° IV. 873.
Isopteryx Klotzsch ° IV. 937. †
— umbellata Kl. ° 937. no. 1.
Isopyrum Linn. IV. 26.
— adiantifolium H. f. et Th. ° IV. 26. n. 1.
— grandiflorum Fisch. IV. 26. no. 2.
Isotoma R. Br. V. 391.
— petraea F. Müller ° 391. no. 1.
— Senecioides 391. no. 2. †
var. subpinnatifida DC. pr.
Juanulloa R. et Pav. V. 586.
— Hookeriana Miers 586. †
— Panamensis Miers 586. †
— parasitica Hook. bot. mag. (s.) 586. †
Jubaea Humb. V. 824.
— spectabilis H. Bonpl. 824. no. 387. †
Jubelina Adr. Juss. ° IV. 370.
— Nicaraguensis Griseb. 370. no. 1.
Jucunda Naud. ° (Miconiae sect.) IV. 708.
— Lhotzkyana Cham. (s.) 708. no. 10.
— Olfersiana Cham. (s.) 708. no. 11.
Juglandeae DC. IV. 451.
Juncaceae Ag. VI. 153.
Juncagineae Lindl. VI. 4.
Juncus Linn. ex p. VI. 154.
— Chilensis Gay ° 154. no. 3.
— communis E. Mey
α. effusus
β. subglomeratus } 154. no. 1.
γ. robustus
— Olympicus Schott ° 154. no. 4.
— revolutus R. Br. 154. no. 2.
Jungia L. V. 313.
— bullata Turcz. ° 313. no. 1.
Juniperus L. V. 795.
— Bonatiana Vis. ° 795. no. 2.
Juniperus Cabiancae Vis. ° 795. no. 1.
— drupacea Labil. (s.) 794. no. 1.
— thurifera hort. Patav. nec alior.(s.)795.n 2.
Jurinea Cass. V. 309.
— arachnoidea Bge. (s.) 309. no. 2.
— Cyanoides Rchb. ° 310. no. 6. †
— dura Fisch. et M. ° 309. no. 3.
— humilis β. DC. pr. (s.) 309. no. 4.
— Ledebourii Bge. ° 309. no. 2.
— mollis Rchb. ° 309. no. 5. †
var. moschata Vis. °
— Pollichii DC. ° 309. no. 1.
— Pyrenaica Godr. et Gr. 309. no. 3.
Jussieua Linn. IV. 675.
— grandiflora Mich. 675. no. 1.
Justicia canescens Lam. (s.) V. 645. no. 2.
— canescens Vahl (s.) 645. no. 3.
— Ghiesbreghtiana Lem. (s.) V. 663. n. 7. †
— lilacina hort. (s.) 658. no. 6.
— longiracemosa hort. (s.) 658. no. 6.
— macrantha Benth. (s.) V. 641. no. 1.
Iva L. V. 215.
— dealbata A. Gr. ° 215. no. 1.
Ixacum inerme Sol. (s.) VI. 970. no. 1.
Ixia L. VI. 49.
— tricolor var. VI. 49. †
Ixionanthus W. Jack IV. 351.
— Chinensis Champ. ° 351. no. 1. †
Ixora L. V. 111.
— Americana Jacq.; Willd.; DC.(s.)127.n.25.†
— Griffithii Hook. 111. no. 3. †
— hydrangeaeformis hort. (s.) 111. no. 3.
— Javanica DC. pr. 111. no. 2. †
— pedunculata Dalz. ° 111. no. 1.
— Sandankwa hort. Bog. (s.) V. 96. no. 1.
— ternifolia Cav. (s.) V. 127. no. 25. †

K.

Kadsura Juss. IV. 78.
— grandiflora Wall. (s.) IV. 79. no. 1.
— Japonica Wall. (non Juss. nec alior.) (s.) IV. 78. no. 1.
— propinqua Wall. (s.) IV. 79. no. 3.
— Roxburghiana Arn. (Hook. et Th.) ° IV. 78. no. 1.
— Wightiana Arn. ° IV. 78. no. 2.
Kaempferia L. VI. 19.
— rotunda Willd. VI. 19. †
— undulata Teysm. et B. ° VI. 19. no. 1.
Kakosmanthus Hassk. ° V. 474.
— macrophyllus Hassk. ° 475. no. 1.
Kalanchoe Adans. V. 11.
Kalanchoe Ritchieana Dalz. ° 11. no. 1.
Kalbfussia Sch. Bip. V. 322.
— occidentalis Jaub. et Sp. pr. p. (s.) 322. no. 1.
— Salzmanni Sch. Bip. 322. no. 1.
Kalidium Moq. (Bge.) ° V. 733.
Kallstroemia Scop. IV. 404.
— grandiflora Torr. in herb. (A. Gray) 404. no. 1.
var. detonsa A. Gray. °
Kariwia Arn. IV. 863.
— Samoensis A. Gray ° 863. no. 1.
var. β. Vitiensis A. Gr. °
Keerlia Gray ° non DC. V. 188.

Keerlia bellidifolia Gr. et Engelm. ° 188. no. 1.
— effusa Gray 188. no. 2.
— linearifolia DC. (s.) = Gutierrezia V. 234. no. 1.
— ramosa DC. (s.) = Aphanostephus sp. 188. no. 2.
— skirrobasis DC. (s.) = Aphanostephus 188. no. 2.
Keferstelnia Rchb. f. ° (sect. Zygopetal. Hook.) VI. 657.
— graminea Rchb. f. ° (s.) 657. no. 13.
— sanguinolenta Rchb. f. (s.) 658. no. 15.
— stapelioides Rchb. f. (s.) 658. no. 14.
Kegelia Rchb. f. ° 613.
— Houtteana Rchb. f. ° 613. no 1.
Kellettia Seem. ° IV. 328.
— ovata Seem ° 328. no. 1.
Kennedya Vent. IV. 552.
— arenaria Reg. 552. no. 1. †
Kentia Bl. Rumph. V. 808.
— paradoxa Mart. 808. no. 72.
— procera Bl. 808. no. 70. †
— sapida Mart. 808. no. 71. †
— (Melodori sect.) H. et Th. ° IV. 60.
Kentrophyllum Neck. V. 366.
— canescens C. Koch et Bouché ° 366. n. 1.
— coeruleum Godr. et Gr. 367. no. 2.
— lanatum DC. (s.) 367. no. 3.
Keratophorus Hsskl. ° V. 475.
— Leerii Hsskl. ° 475. no. 2.
— Wightii Hsskl. ° 475. no. 1.
Kernera Medik. IV. 200.
— Boissieri Reuter ° IV. 200. no. 1.
Kerneria Mnch. V. 225.
— bipinnata Godr. et Gr. 225. †
Kibara Endl. (Tul. °) IV. 110.
— Blumei Steud. (s.) IV. 111. no. 1.
— chartacea Bl. ° IV. 111. no. 2.
var. apiculata Bl. ° IV. 111. no. 2.
— coriacea Tul. ° IV. 111. no. 1.
(adde l. c. ic. Bl. mus. bot. II. tab. IX.)
— cuspidata Bl. ° IV. 111. no. 4.
— obtusa Bl. ° IV. 111. no. 3.
Kibessia DC. IV. 799.
— angustifolia Bl. 799. no. 6.
— azurea Bl. 799. no. 1.
— cordata Korth. 799. no. 3.
— cupularis Decsne 799. no. 7.
— sessilis Bl. 799. no. 5.
— simplex Korth. 799. no. 4.
— subulata Bl. 799. no. 2.
Kibessieae (Melastomacear. subordo) Naud ° IV. 798.
Kiesera Reinw. IV. 554.
Kiesera ? gracilis Miq. ° 554. no. 1.
— minor Miq. ° 554. no. 1.
Kigelia DC. V. 523. et in adnot.
— Aethiopica Decsne (s.) 523. no. 1. †
— Africana Benth. (s.) 523. no. 1.
— pinnata DC. pr. 523. no. 1.
Klanderia chlorantha F. Müll. V. 667.
Klopstockia (Ceroxylon Mart.) Karst. ° V. 840.
— cerifera Karst. ° 840. no. 1.
— interrupta Karst. ° 840. no. 2.
— utilis Karst. ° 840. no. 3.
Klugia Schlchtd. V. 526.
— Notoniana DC. pr. 526. †
Knautia Coult. V. 142.
— subscaposa Boiss. et R. 142. no. 1.
Knesebeckia Klotzsch ° IV. 887.
— acutiloba Kl. ° 889. no. 9.
— Aucubaefolia Kl. ° 887. no. 1.
— Balmisiana Kl. ° 890. no. 11.
— biserrata Kl. ° 888. no. 7.
— bulbifera Kl. ° 890. no. 11.
— crenatiflora Kl. ° 888. no. 6.
— discolor Kl. ° 888. no. 4.
— falciloba Kl. ° 889. no. 10.
— ignea Kl. ° 889. no. 8.
— incarnata Kl. ° 887. no. 2.
— Martiana Kl. ° 890. no. 12.
— monopetala Kl. ° 890. no. 13.
— papillosa Kl. ° 887. no. 3.
— pedata Kl. ° 888. no. 5.
— phyllomaniaca (hybr.) Kl. ° 890. no. 15.
Kniphofia Mnch. VI. 133.
— Aloides Mönch (s.) 133. no. 1.
— Rooperi Lemaire (s.) 133. no. 1.
— sarmentosa Knth 133. no. 2.
— Uvaria Hook. ° 133. no. 1. †
Koeleria Pers. VI. 1024.
— Balansae expl. Alg. ° 1024. no. 1.
— campestris Ph. ° 1024. no. 3.
— Cantabrica Wk ° 1025. no. 7.
— Castellana Boiss. et R.
var. velutina Wk. ° 1025. no. 5.
— crassipes Lge. 1025. no. 8. et 1026. n. 14.
— Michelii expl. d'Alg. ° 1024. no. 2.
— maritima Lge ° 1026. no. 9.
— phleoides Pers. ° 1026. no. 11.
α. genuina Wk. °
— setacea Pers.
α. glabra Godr. ° } 1025. no. 6.
β. ciliata Godr. ° }
γ. pubescens Parl. ° }
δ. quinqueflora Wk. ° }
— Sinaica Boiss. ° 1025. no. 4.
Koellensteinia Rchb. f. ° VI. 551.
— graminea Rchb. f. ° 552. no. 3.

Koellensteinia Kellneriana Rchb. f. ° 552. no. 1. †
— tricolor Rchb. f. ° 552. no. 2. †
Koellikeria Regel ° V. 413. †
— argyrostigma Reg. ° 417. no. 1. †
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β. Moritziana Hanst. °
γ. ovalifolia Oerst. °
— subdimidiata Kl. et Hanst. ° 428. no. 4.
Koelpinia Pall. V. 317.
— linearis Pall. (Bge.) ° 317. no. 1.
Körnickea lanata Reg. (s.) V. 418. no. 1.
Kohleria Reg. ° V. 407. †
— ignorata Reg. 407.
— Seemanni Hanst. 407.
Kohlrauschia obcordata Rchb.; Vis. (s.) 273. no. 24.
Kokoona Thw. ° IV. 368.
— Zeylanica Thw. ° 368. no. 1.
Kolbia Palis. V. 4.
Konigia maritima L. IV. 198. no. 1.
Kopsia Blume V 493.
— arborea Bl. ° 493 no. 1.
— flavida Bl. 493. no. 2.
Kopsia fruticosa DC. pr. (s.) 492. no. 1.
Korthalsia Bl. V. 833. no. 856.
— angustifolia Bl. 833. no. 561.
— debilis Bl. 833. no. 559.
— Junghuhnii Miq. ° 856. no. 1.
— laciniosa Mart. 833. no. 556.
— polystachya Mart. 833· no. 553. †
— rigida Bl. 833. no. 554.
— robusta Mart. 833. no. 557.
— rostrata Bl. 833. no. 558.
— scaphigera Mart. 833. no. 555. †
— Zippelii Bl. 833. no. 560.
Kostelctzkya Presl IV. 304.
— Coulteri A. Gr. ° 304. no. 1.
— palmata Presl 304. no. 2.
Krameria Loefl. IV. 240.
— canescens A. Gray ° 240. no. 1.
Krigia Schreb. V. 318.
— Bellidioides Scheele ° 318. no. 1.
Kuhnia L. V. 161.
— Arabica Steud. et Hochst. (s.) V. 208. n. 1.
— multiramea Turcz. ° 161. no. 1.
Kunthia Humb. V. 805.
— montana Humb. Mart. 805. no. 1. †

L.

Labiatae Benth. V. 667.
Labiatiflorae V. 310.
Labichea Gaud. IV. 600.
— diversifolia Meisn. 600. †
— tephrosiaefolia Meisn. ° 600. no. 1.
Lablab Adans. IV. 564.
— Javanicus Miq. ° 564. no. 2.
— vulgaris Savi 564. no. 1.
Lacaena Lindl. ° VI. 612.
— bicolor Lindl. 612. no. 1.
— spectabilis Lindl. ° 612. no. 2.
Laceraria Naud. ° (Miconiae sect.) IV. 709.
Lachnagrostis Trin. (s.) 982. no. 26.
Lachnocaulon Knth. (Körnicke) ° V. 920.
— Beyrichianum Sporl. (Körn.) ° 920. n 2.
— digynum Körnicke ° 950. no. 4.
— glabrum Körnicke ° 920. no. 3.
— Michauxii Knth. (Körn.) ° 920. no. 1.
Lachnophyllum Bge. ° V. 184.
— Gossypinum Bge. ° 184.
Lacis Lindl. (Tul.) ° V. 776.
— aspera Raeuschel (s.) 755. no. 1.
— Bongardi Tul. 776. no. 1. †
— disticha Cham. (s.) 784. no. 2.
— fallacissima Bisch. (s.) 781. no. 10.
— fluviatilis Schreb. et aliis (s.) 775. n. 1.
Lacis foeniculacea Bong. et aliis (s.) 777. n. 2.
— monadelpha Bong (s.) 776. no. 1.
— Ruppioides Bong. (s.) 781. no. 3.
— Schiedeana Cham. (s) 778. no. 4.
Lacistemia Swartz IV. 228.
Lactaria salubris Rumph (s.) V. 492. no. 2.
Lactuca Tournef. V. 324.
— brevirostris Champ. ° 324. no. 1.
— Plumieri Gren. et Godr. 324. no. 2.
— ramosissima Gren. et Godr. ° 324. n. 3.
Ladenbergia ovalifolia Klotzsch (s.) V. 119. no. 7. †
Laelia (vide Bletia Rz. et Pav.) VI. p. 418.
— acuminata Lindl. Bot. R. (s.) 427. n. 29.
— albida Bat. bot. Reg ° (s.) 428. no. 33.
— anceps β. Barkeriana Lindl. (s.) 418. no. 2. †
— autumnalis Lindl.; Hook. (s.) 427. n. 30.
— Boothiana Rchb. f. in Otto (s.) 424. n. 21.
— Casperiana Rchb. f. in Koch et Fintelm. (s.) 423. no. 17.
— caulescens Lindl. bot. R. (s.) 431. no. 37. 38. †
— cinnabarina Batem. ° (s.) 430. no. 36. †
— cinnamomea Rchb. f. (s.) 418. no. 3.
— crispa Rchb. var. reflexa (s.) 423. n. 15.

Laelia discolor A. Rich. et Gal. ° (s.) 429. no. 33.
— elegans Rchb. f in Otto (s.) 427. n. 28.
— euspatha Rchb. f. in Otto (s.) 424. n. 19.
— flava Lindl. Bot. R. ° (s.) 431. no. 37.
— furfuracea Lindl. bot. R. (s.) 428. n. 31.
— grandis Lindl. (s) 424. no. 20. †
var. purpurea Rchb. (s.) l. c.
— Lindenii Lindl. (s.) 431. no. 40.
— majalis Lindl. ms. (s.) 428. no. 32.
— peduncularis Lindl. bot. R. (s.) 426. no. 25. †
— praestans Lindl. (s.) 425. no. 23.
— pumila Rchb. in fl. Serr. IX. (s.) 422. no. 11. †
— purpurata Lindl. in Paxt. (s.) 423. n. 16. †
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— ovalifolia Teysm. et Binn. ° 690. no. 7.
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var. β. linifolium. °
var. γ. myrtifolium. °
var. δ. prostratum. °

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— longicorne Sw. (s.) 900. no. 5.
— nutans Roxb. (s.) 631. no. 1. †
— recurvum Roxb. (s.) 632. no. 2.
Limosella L. V. 629.
Linaria Juss. V. 616.
— alpina Desf. 618. †
— Bieberstenii Bess. (s.) 618. no. 10.
— Brunneri Benth.
var. glaberrima Schmidt ° 618. no. 11.
— Coelesyriaca Boiss. ° 616. no. 4.
— floribunda Boiss. ° 616. no. 3.
— glacialis Boiss.
var. leiosperma Coss. 618. no. 12.
— Iconia B. et Heldr. ° 617. no. 7.
— lineolata Boiss. in Kotschy ° 617. n. 6.
— longipes B. et Heldr. ° 616. no. 1.
— macropoda B. et Reuter 618. no. 14.
— microcalyx Boiss.
acutiloba B. et Heldr. ° 616. no. 2.

Linaria modesta Boiss. ° 617. no. 8.
— monochroma B. et Heldr. ° 617. no. 5.
— reticulata Desf. 618. †
— rubrifolia Rob. et Cast. var. grandiflora Coss. 618. no. 13.
— vulgaris Mill. ° 618. no. 10.
— Webbiana Schmidt ° 617, no. 9.
Lindackeria Presl IV. 227.
— latifolia Benth. IV. 227. no. 2.
— pauciflora Benth IV. 227. no. 1.
Linastrum (Lini subgenus) Planch. IV. 296.
Lindelofia Lehm. ° V. 538.
— Anchusoides Lehm. 539. no. 2.
— spectabilis Lehm 539. no. 1.
Lindenbergia Lehm. V. 628.
— Urticaefolia Lehm. V. 628. †
Lindleya H. B. K. IV. 668.
— mespiloides H. K. 668. no. 1. †
Lineae DC. IV. 295.
Linopsis (Lini subgenus) Planch. IV. 296.
Linosyris Lobel V. 193.
— carnosa A. Gr. ° 194. no. 6.
— Coronopifolia A. Gr. ° 194. no. 5.
— heterophylla A. Gr. ° 193. no. 1.
— hirtella A. Gr. ° 194 no. 3.
— Mexicana Schlchtd. h. Hal. 193. obs.
— pulchella A. Gr. ° 194. no. 4.
— serrulata Torr ° 194. no. 7.
— Wrightii A. Gr. ° 194. no. 2.
Linociera *Swrtz.* V. 482.
— rostrata Teysm et B. ° 482. no. 1.
Linschotenia Vr. V. 369. 379.
— discolor Vr. 379. no. 1. †
Linum L. IV. 295.
— asperifolium B. et R. ° 295 no. 4.
— chironioides Griseb. ° 296 no. 6.
— grandiflorum Desf. ° 295. no. 2. †
— Greggii Engelm. ° 296. no. 7.
— Munbyanum B. et Reut. ° 295. no. 3.
— squarrosum Munby ° 296. no. 5.
— tenue Munby (s.) 295. no. 3.
— usitatissimum L. var. regale Scheidw. 295. no. 1 †
Liparis L. C. Rich. VI. 217.
— biflora R. Wight ° 218. no. 5. †
— bituberculata Lindl. 218. no. 3.
— elliptica Rchb f. 218. no. 6.
— elliptica R. Wight (s.) 218. no. 10.
— Kappleri Rchb. f. 218. no. 7.
— longipes Lindl. 218. no. 11.
— nervosa Lindl. ° 217. no. 2.
— odorata Lindl. ° 217. no. 1.
— paradoxa Rchb. f. 218. no. 8.
— serraeformis Lindl. (s.) 498. no. 6.
— Wageneri Rchb. ° 218. no. 4.
Liparis Wightii Rchb. f. ° 218. no. 9.
Lippia L. V. 707.
— asperifolia Rich. ° 707. no. 3.
— Betulaefolia H B. K. 707. †
— Chamissonis D. Dietr. 707. †
— cuneifolia Torr. 707. †
— Hederaefolia Mart. et Sch. 707. †
— hirta Schauer 707. †
— lasiocalycina Cham. 707. †
— lycioides Steud. 707. †
— microcephala Cham. 707. †
— Rhodocnemis Mart. et Sch. 707. †
— Rosmarinifolia Ands. ° 707. no. 1.
— rotundifolia Cham. 707. †
— Salicifolia Ands. ° 707. no. 2.
— Stachyoides Cham. 707. †
Liquidambar L. V. 86.
— Chinense Champ. 86. no. 1.
Liriodendron grandifl. Roxb. (s.) IV. 41. n. 3.
Liriothamnus Nutt. ° (Rhodod sect.) V. 450.
Lisianthus Aubl. V. 513.
— alatus Aubl. ? (s.) 515. no. 13.
— amoenus Miq. (s.) 514. no. 11. γ.
— auriculatus Benth. (s.) 515. no. 13.
— breviflorus Benth. 514. no. 10.
— Campanuloides Spruce ° 514. no. 8.
— chelonioides L. 515. no. 12.
— coerulescens Aubl. 514. no. 7.
— fistulosus Poir. 515. no. 13.
— glandulosus A. Rich. ° 513. no. 1. †
— gracilis Griseb. ? (s.) 514. no. 11. γ.
— Oerstedii Griseb. ° 513. no. 2.
— pumilus Benth. 513. no. 3.
— ramosissimus Benth. ° 513. no. 5.
— recurvus Benth. ° 514. no. 6.
— Spruceanus Benth. ° 514. no. 9.
— subcordatus Benth. ° 513. no. 4.
— tetragonus Benth. (s.) 515. no. 13.
— uliginosus Griseb. (Benth.) 514. no. 11.
var. fl. amplis coerulis.
var. fl. amplis albis.
var. fl. minorib. coeruleis.
Lissochilus R. Br. VI. 669.
— aequalis Lindl. ° 670. no. 6. †
— calopterus Rchb. f. ° 670. no. 7.
— parviflorus Lindl. ° 669. no. 4.
— platypetalus Lindl. ° 670 no. 5. †
— roseus Lindl. 669. no. 3.
— speciosus R. Br. 669. no. 1.
— streptopetalus Lindl. ° 669. no. 2. †
Listrostachys Rchb. f. ° VI. 907.
— arcuata Rchb. f ° 907. no. 1.
— Ashantensis Rchb. f. ° 908. no. 5.
— caudata Rchb. f. ° 907. no. 2.
— Jenischiana Rchb. (s.) 909. no. 6. var.

Listrostachys monodon Rchb. f. ° 908. no. 4.
— pellucida Rchb. f. ° 908. n. 3.
— pertusa Rchb. f. ° 908. no. 6.
a. Jenischiana °
b Pescatoriana °
— polystachys Rchb. f. 909. no. 7.
— subulata Rchb. f. ° 909. no. 8.
Lithospermum Tournef. V. 550.
— incrassatum Vis. 550. †
— petraeum A. DC. 551. †
Littonia Hook. ° VI. 101. et 153.
— modesta Hook.° VI. 101. et 153. †
Livistona R. Br. V. 816.
— australis R. Br. 816. no. 213.
— ? Bissula Mart. 817. no. 219.
— Chinensis Mart. 816. no 211. †
— ? Cochinchinensis Bl. Rumphia 817. n. 220.
— ? Gaudichaudii Mart. 817. no. 218.
— humilis R. Br. 816. no. 209. †
— Jenkinsii Griff. ° 816. no. 214.
— inermis R. Br. 816. no. 210. †
— ? Martiana Gaud. 817. no. 217.
— Olivaeformis Mart. 817. no. 216.
— rotundifolia Mart. 816. no. 212. †
— spectabilis Griff. (s.) 816. no. 212.
— subglobosa Mart. 817. no. 215.
Llavea Liebm. ° IV. 424.
— viscosa Liebm. ° 424. no. 1.
Loasa Adanson V. 5.
— Schlimiana Planch. et Lind. V. 5. n. 1. †
Loasaceae Lindl. V. 5.
Lobazia? Urticaefolia DC. pr. (s.) V. 238. no. 2.
Lobelia Linn. V. 390.
— Ghiesbreghtii 390. no. 1. †
— inflata L. 390. †
— splendens Willd. 390. †
— Texensis Raf. 390. †
— Thapsoides Schott 390. no. 2.
— trigonocaulis F. Müller 390. †
Lobeliaceae Juss. V. 389.
Locheria Regel ° V. 406. 414. 420. †
— heterophylla Klotzsch ° 421. no. 3.
— hirsuta Reg. ° 421. no. 1.
α. vera Hanst. °
β. splendens Reg. °
γ. magnifica Reg. °
— ignescens Reg. Cat. 1851. (s.) 421. n. 3.
— magnifica Pl. et Lind. (s.) 427. n. 5. †
— multiflora Reg. Fl. (s.) 423. no. 1.
— pedunculata Regel ° 421. no. 2.
α. major Hast. et Kl. °
β. gracilis Oerd. °
Lockhartia Hook. VI. ° 818.
— acuta Rchb. f. ° 819. no. 4. †
Lockhartia elegans Hook ° 820. no. 4. †
— Gavazensis Rchb f ° 822. no. 10. †
— lunifera Rchb f ° 821. no. 9.
— micrantha Rchb. ° 820. no. 6. †
— mirabilis Rchb. f ° 820. no. 7. †
— Oerstedii Rchb. f. ° 821. no 8. †
— pallida Rchb. f. ° 819. no 2 †
— Parthenocomos Rchb f. 819 no. 3.
— Weigeltii Rchb. ms ° 820. no. 5.
Lodoicea Labill. V. 815.
— Sechellarum Labill 815. no. 180. †
Loeflingia Lin. IV. 244.
— Gaditana B. et Reut. ° IV. 244. no. 1
— micrantha B. et Reut. ° IV. 244. no. 2
Logania R. Br. V. 508.
— depressa Hook. f. ° 508. no. 1.
— campanulata Br. 508 †
— hyssopoides N. a Es. (s.) 508. †
Loganiaceae Endl. V. 506.
Logfia Cass. V. 289.
— Gallica Coss. et Germ. 289. †
Lolium L. VI. 1046.
— glumosum Plum. ° 1046. no. 3.
— lepturioides Boiss. ° 1046. no. 2
— perenne L. 1047. no. 4.
— Persicum Boiss. et Hoh. ° 1046. no. 1
Lonchestigma DC. pr. (s.) V. 572.
— caulescens DC. (s.) 572.
— squarrosum DC. (s.) 572.
Lonchocarpus H. B. K. IV. 580.
— velutinus Benth. (Seem.) ° 580. no. 1.
Lonchostephus Tul. ° V. 776.
— elegans Tul. ° V. 777. no. 1. †
Lonicera Desf. V. 94.
— diversifolia Wall. (Hook.) ° 95. no 4. †
var. β. Royleana Wall.
— dumosa A. Gray ° 94. no. 1.
— fragrantissima Paxt. 96. †
— glutinosa Vis. ° 95. no. 3.
— Hispanica Boiss. et R. ° 95. no. 2.
— hirtiflora Champ. ° 96 no. 7.
— Loureiri Bl. (Hook ic.) ° 95. no. 5 †
var. β. major Hook °
— multiflora Champ. ° 96 no. 8.
— occidentalis Hook. (v. Schl.) ° 96. n. 1.
— periclymenum Boiss. voy. bot. (s.) 95 no. 2.
— reticulata Champ. ° 95 no. 6.
Loniceraeae Endl V. 94.
Lopezia Cav. IV. 682.
— albiflora Schlchtd. 682. no. 2.
— macrophylla Planch. 682. no. 3. †
— macrophylla Benth. 682. no. 4. †
— paniculata Seem. ° 682. no. 1.
— villosa hort. (s.) 682. no. 2.

Lophogyne Tul. ° V. 782.
— arculifera Tul. et Wedd. ° 782. no. 2. †
— helicandra Tul. 782. no. 1. †
Loranthaceae Lindl. V. 90.
Loranthus L. V. 92.
— (Psittacanthus?) celastroides Sieb. (A. A. Gray) ° 94. no. 12 †
— flavidus Hook. f. ° 93. no. 7. †
— insularum (Dendrophtoë Mart.) A. Gray ° 93. no. 10. †
— Junghuhnii Molkh. ° 92 no. 4.
— Korthalsii Molkh. ° 92. no. 2.
— leucostachys Molkh. ° 93. no. 5.
— longifolius Hook. f. ° 93. no. 6. †
— (Dendrophtoë Mart.) Maytenifolius A. Gray ° 93 no. 11. †
— Medinensis Molkh. 92. no. 3.
— micranthus Hook. f. ° 93. no. 8.
— Oorthianus Korth. ° 92 no. 1.
— tenuifolius Hook. f. ° 93. no. 9.
Lorentea (Pectidis sect.) A. Gr. ° V. 147.
Lorentea Less. V. 147.
— capillipes Benth. ° 147. no. 2.
— linearis And. ° 147. no. 1.
Lorenzanea Liebm. (Meliosma Bl.) IV. 881.
Loreya DC. ° IV. 778.
— arborescens DC. 778. no. 1.
— fasciculiflora Naud. ° 778. no. 2.
Lotus L. IV 476.
— Crantzii Vis. 477. no 4.
— glareosus Boiss. et R. ° 476. no 2.
var. α glabrescens °
var. β. villosus °
var. γ. glacialis °
— macrotrichus Boiss. ° 476. no. 1.
— Salzmanni B. et R. ° 477. no. 3.
Loudonia Lindl. IV. 683.
— citrina F. Müll. ° 683. no. 1.
Lozania Mutis IV. 228.
Lucaea Knth. VI. 1054.
— Vriesii Büse ° 1054. no. 1.
Lucuma Molina V. 478.
— Valenzuelana A. Rich. 478. no. 1.
Ludia foetida Roxb. (s.) IV. 440. 2.
Ludwigia Roxb. IV. 675.
— ebracteata Schlechtend. ° 675. no. 1.
— parviflora? Roxb 675. no. 1.
Luedemannia Lind. Rchb. f. ° 563. n. 1. †
— Pescatorei Lind. Rchb. f. 563. no. 1. †
Luffa Cav. IV. 863.
— Bandaal? Roxb. 863. no. 2.
— insularum A. Gr. ° 863. no. 1.
— longistylis Edgew. (in eventu) 863. no. 2.
Luisia Gaud. ° VI. 619.
— antennifera Bl. mus. 619. no. 3.
— Birchea Bl. (s.) 619. no. 4.
— confusa Rchb. f. ° 621. no. 7.
— Psyche Rchb. f. 619. no. 2.
— teres Bl.; Lindl. ° 621. no. 10.
— tenuifolia Bl. mus ° 619. no. 4.
— teretifolia Gaud. ° 621. no. 6. †
— teretifolia Bl. (s.) 621. no. 7.
— trichorrhiza Bl. ° 620. no. 5.
— valida Rchb. f. 621. no. 11.
— volucris Lindl. ° 619. no. 1.
— Zeilanica Lindl. 621. no. 9.
Luma A. Gray ° IV. 828.
— Baeckeoides Griseb. 830. no. 8.
— Cheken A. Gray ° 829. no. 1. †
var. α. A. Gray °
var. β. A. Gray °
var. γ. A. Gr. °
var. δ. A. Gray °
— Correaefolia A. Gr. 830. no. 7. †
— Cruckshanksii A. Gr. 829. no. 3.
— ferruginea A. Gr. 830. no. 6.
— obtusa A. Gr. ° 829. no. 5.
— stenophylla A. Gr 829. no. 4.
— Temu A. Gray ° 829. no. 2.
Lumnitzera Willd. IV. 672.
— coccinea W. et Arn. 672. no. 1.
— purpurea Presl. (s.) 672. no. 1.
— racemosa Willd 672 no. 2.
Lupinus Tournef. IV. 462.
— Clarkei Oerdst. ° 462. no 3.
— Cruckshanksii A. Gray ° 462. no. 2.
— Hartwegii Lindl. 462. no. 5. †
— Pickeringii A. Gray ° 462. no. 1.
— pubescens Benth. 462. no. 4 †
Luvunga Ham. IV. 356.
— scandens Ham. 356. no. 1. †
Lycaste Lindl. VI. 600.
— acintha Rchb. f (s.) 513. no. 19.
— acuminata Rchb. f. (s.) 512. no. 18.
— aromatica Lindl. ° 600. no. 1.
— balsamea A. Rich. (s) 602. no. 7.
— barbifrons Lindl. ° 605. no. 19.
— Barringtoniae Lindl. ° 609. no. 24.
— brevispatha Kl. ° (s.) 604. no. 15.
— candida Lindl. ° 604. no. 15. †
— chrysoptera Morr. (Lindl.) ° 601. no. 5.
— ciliata Lindl. herb. (Bonpl.) ° 606. n. 22.
— cochleata Lindl. ° 601. no. 4.
— consobrina Rchb. f. ° 600. no. 2.
— costata Lindl. ° 603. no. 20.
— crinita Lindl. ° 601. no. 3.
— cruenta Lindl. ° 601. no. 7.
— Deppii Lindl. ° 602. no. 9.

Lycaste fulvescens Hook. bot. mag. ° 605. no. 18. †
— gigantea Lindl. ° 601. no. 17.
— lanipes Lindl. ° 606 no. 21.
— leucantha Kl. ° 603. no. 13.
— macrobulbon Rchb. f. 601. no. 6.
— macrophylla Lindl. ° 602. no. 12.
— mesochlaena Rchb. f. ° (s.) 606. no. 21.
— plana Lindl. (s.) 603 no. 12.
— pleiochroma Rchb. f. 602. no. 11.
— Reichenbachii Gireoud (Bonpl.) 606. n. 23.
— Schilleriana Rchb. f. ° 601. no. 16.
— tetragona Lindl. ° 602. no. 8. †
— tricolor Kl. ° 603. no. 14.
Lychnis Tournef. IV. 292.
— apetala L. (s.) 293. no. 1.
— Corsica Lois. (s.) 289. no. 49. et 291. no. 1.
— diclinis Lag. (s.) 291. no. 1.
— dioica DC. pr. p. (s.) 288. no. 45.
— diurna Sibth (s.) 288. no. 46.
— grandiflora Jacq. ° 292. no. 3. †
— laeta Ait. (s.) 288. no. 48. et 291. n. 2.
— Preslii Sekera ° 292. no. 1.
— Sieboldii van Houtte ° 292. no. 2. †
Lycioplesium Miers V. 574.
— fasciculatum Miers 574. †
— pubiflorum Griseb. ° 574. no. 1.
Lycium acutifolium E. Mey. ° V. 578. n. 14. †
— Afrum L. 578. no. 15. †
— Americanum Jacq. (Miers) ° 585. n. 69
— arenicolum Miers ° 577. no. 11. †
— austrinum Miers ° 577. no. 9.
— barbarum L. 581. no. 39. †
— barbinodum Miers ° 580. no. 34. †
— Berlandieri Don 580. no. 32.
— brevipes Benth. 581. no. 38. †
— capillare Miers ° 582. no. 50. †
— carnosum Poir. 578. no. 16. † (an Afri varietas?)
— Carolinianum Mich. 583. no. 58.
— Cestroides Schlchtd. 579. no. 28. †
— Chilense Miers 584. no. 62. †
— Chinense Mill. (s.) 581. no. 43.
— cinereum Thunb. 578. no. 21. †
— Cochinchinense Lour. (s.) 581. no. 43.
— confertum Miers ° 580. no. 31. †
— Craussii Dun. 581. no. 44.
— echinatum Dun. ° 578. no. 18. †
— Edgeworthii Dun. 581 no. 41. †
— elongatum Miers ° 579. no. 29. †
— erosum Miers ° 585. no. 67. †
— europaeum L. 576. no. 2. †
— fagosum Miers ° 579. no. 24. †
— ferocissimum Miers 581. no. 49. †
Lycium filifolium Gill. (Miers) ° 583. no. 60 -
var. β. minutifolium Miers 584. n. 60. [illegible]
— floribundum Dun. 582. no. 51. †
— foliosum Stocks ° 585. no. 70.
— fuscum Miers 579. no. 30. †
— Gilliesianum Miers ° 583. no. 68. †
— glaucum Miers ° 578. no. 17. †
— glomeratum Sendtn.
var. obovatum Miers 580. no. 35. -
— Grevilleanum Gill. ms. (Miers) ° 58[illegible] no. 66. †
— halophyllum Welw. (Miers) ° 576. no. 6
— hirsutum Dun. 577. no. 10.
— ignarum Miers 583. no. 59. †
— implexum Miers ° 579. no. 25. †
— Indicum R. Wght. 576. no. 3. †
— infaustum Miers ° 583. no. 56. †
— intricatum Boiss. 576. no. 5. †
— Martii Sendtn. 583. no. 57. †
— megistocarpum Dun. (s.) 581. no. 43.
— minutifolium Remy 579. no. 26.
— nodosum Miers ° 580. no. 36. †
— orientale Miers ° 576. no. 7. †
— oxycarpum Dun. 576. no. 4. †
— oxycladum Miers ° 577. no. 12. †
— pallidum Miers ° 578. no. 23. †
— Patagonicum Miers ° 584. no. 64. †
— pendulum Miers ° 578. no. 22. †
— Persicum Miers ° 576. no. 8. †
— Prunus spinosi Dun. 581. no. 47.
— pubescens Miers 584. no. 63. †
— quadrifidum Moç et Sesse (s.) 583. n. [illegible]
— Requieni Dun. 581. no. 46.
— rhachidocladum Dun. 582. no. 52. †
— rigidum Thunb. 581. no. 45.
— roridum Miers ° 577. no. 13. †
— Ruthenicum Murr. 581. no. 42. †
— Ruthenicum Dun. (non Murr.) (s.) 581. no. 48. †
— saevum Miers ° 576. no. 1. †
— salsum Rz. et Pav. 584. no. 61. †
— scoparium Miers ° 584. no. 65. †
var. β. lineare Miers †
var. γ. confertiflorum Miers †
var. δ. divaricatum Miers †
var. ε. affine Miers †
— senticosum Miers ° 580. no. 33. †
— spinulosum Miers ° 582. no. 55. †
— stenophyllum Remy 579. no. 27.
— stolidum Miers ° 582. no. 54. †
— Tataricum Pallas 581. no. 48. †
— tenue Willd. 578. no. 20. †
— tenuispinum Miers ° 582. no. 53. †
— tetrandrum Thunb. 578. no. 19. †

Lycium Turcomannicum Turcz. ms. (Miers)° 581. no. 40. †
— vimineum Miers ° 580. no. 37. †
— vulgare Dun. 581. no. 43. †
Lycomormium Rchb. f. ° VI. 611.
— squalidum Rchb f. 612. no. 1.
Lycoseris Cass. V. 311.
— grandis Benth. ° 310. no. 1.
Lycymna suaveolens Hance (s.) V. 490. n. 3.
Lysiloma Benth. IV. 635.
— Sabicu Benth. ° 635. no. 1.
Lysimachia L. V. 471.
— alpestris Champ. ° 471. no. 1.
— ciliata L. 471. †
— Leschenaultii Duby 471. †
Lysimachia nemorum L. 471. †
Lysimachia Nummularia L. 471. †
— punctata L. 471. †
— thyrsiflora L. 471. †
— verticillata M. B. 471. †
— vulgaris L. 471. †
— Zawadskii Wiesn. 471. no. 2.
Lythrarieae Juss. IV. 685.
Lythrum L. IV. 688.
— gracile DC. ? (s.) 688. no. 1. β.
— Salicaria L. (Boeckel) 688. no. 1.
α. commune
β. longistylum
γ. glaberrima
δ. diversifolia
ε. canescens
ζ. splendens Boeck.

M.

Maba Forst. V. 478.
— Ebenus Spreng. (Hsskl.) ° 478. no. 1.
Macarthuria Hueg. V. 741.
— apetala Harv. ° 741. no. 1.
Macella C. Koch ° V. 229.
— hirta C. Koch ° 229. no. 1.
Machaeranthera N. a. Es. V. 175.
— canescens var. latifolia A. Gray ° 175. no. 2.
— parviflora A. Gray ° 175. no. 3.
— Tanacetifolia N. 175. no. 1. †
var. humilis A. Gr. °
var. pygmaea A. Gr. °
Machaerium Pers. IV. 571.
— Blumei Zipp. (s.) 577. no. 9.
— Seemanni Benth. (Seem.) ° 571. no. 1.
Mackaya Arn. IV. 867.
— populifolia Arn. 867. no. 1.
Macradenia R. Br. VI. 696.
— Brassavolae Rchb. f. ° 697. no. 5.
— loxoglottis Focke et Rchb. f. ° 697. n. 4.
— lutescens R. Br. 696. no. 1.
— lutescens (s.) 330. no. 54.
— mutica Lindl. (s.) 679. no. 2.
— Surinamensis Rchb. f. ° 697. no. 3.
— triandra Lindl. ° 696. no. 2.
Macroblepharus Phil. ° VI. 1007.
— contractus Ph. ° 1007. no. 1.
Macrocapnos Royle (Dicentrae sect.)
— scandens Royle (s.) IV. 178. no. 3.
Macrocarya (Parinarii subgen.) Miq. ° IV. 645.
Macrochilus Fryanus Flor. Cab. (s.) VI. 760. 116. 3. †
Macrochloa tenacissima Knth. (s.) 974. n. 10
Macrochordion de Vr. ° VI. 69.
— tinctorium de Vr. ° 69. no. 1.
Macrocnemum P. Br. (Wedd.) ° V. 119.
— cinchonoides Wedd. 119. no. 6.
— coccineum Vahl (s.) 123. no. 1.
— exsertum Oerdst. ° 119. no. 8.
— glabrescens Wedd. 119. no. 5.
— grandiflorum Wedd. 119. no. 3.
— Humboldtianum Wedd. 119. no. 7.
— Jamaicense DC. 119. no. 1.
— pubescens Wedd. 119. no. 4.
— roseum Wedd. 119. no. 2.
— tubulosum A. Rich. (s.) 130. no. 2.
Macrolepis Ach. Rich. ° (Bolbophylli sp.?) 265. no. 3.
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Macrolobium Zipp. mss. ° IV. 610. (conf. Intsia Amboin.)
— bijugum Colebr. (s.) IV. 594. no. 1.
Macromyrtus Miq. ° IV. 819.
— Javanica Miq. ° 850. no. 1.
Macropidia J. Drum. ° VI. 89.
— fumosa J. Drum. 98. no. 1.
Macroplacis Bl. IV. 798.
— cordata Bl. 798. no. 1.
Macropsidium (Bl. gen.) (Psidii sect. Miq.) ° IV. 832.
— elegans Bl. (s.) 832. no. 2.
Macrorhynchus Less. V. 325.

Macrorhynchus aurantiacus Fisch. et Mey. 325. no. 1.
— Chilensis Less. 325. no. 2.
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Madaria DC. V 238.
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— Douglasii C. Koch ° 239. no. 1.
Maddenia Hook. et Th. ° IV. 640.
— Himalaica ° H. f. et Th. ° 640. no. 1. †
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— Campbellii H. f. et Th. ° IV. 41. no. 1.
— globosa H. f. et Th. ° IV. 41. no. 2.
— insignis Bl. (s.) 40. no. 2.
— Pundoana Wall. (s.) 40. no. 7.
— sphenocarpa H. et Th. ° IV. 41. no. 3.
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— Emodi DC. pr. 550 †
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— Nepalensis (s.) IV. 142. no. 1.
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Majeta Aubl. IV. 699.
— dispar Miq. (s.) 699 no. 1.
— Guianensis Aubl. 699 no. 1.
— heterophylla DC. (s.) 699. no. 23.
— hypophysca Mart. (s.) 699. no. 1.
Malachium Fr. IV. 264.
— calycinum Willk. IV. 264. no. 1. †.
Malacothrix DC. V. 323.
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— anthropophora Rchb. ° 215. no. 41.
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— bicornis Rchb. ° 211. no. 17.
— brachystachys Rchb. ° 211. no. 19.
— brevifolia Rchb. ° 215. no. 36.
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— caudata Willd. sp. pl. (s.) 767. no. 116.
— caulescens Rchb. ° 215. no. 39.
— cernua Willd. (s.) 632. no. 2.
— cimicina Rchb. ° 216. no. 44.
— (Oberonia) cylindrica Rchb. f. ° 209. n. 3
— demissa Rchb. ° 211. no. 18.
— denticulata Rchb. f. ° 208. no. 5.
— ensiformis Smith ° 212. no. 21.
— equitans Bl. (s.) 215. no. 38.
— forcipata Rchb. f. ° 209. no. 7.
— glandulosa Rchb. ° 215. no. 37.
— (Oberonia) Griffithiana Rchb. f. ° 209. no. 3.
— Jenkinsiana Rchb. ° 211. no. 20.
var. α et β. °
— imbricata Bl. Bidr. ° 214. no. 31.
— (Oberonia Lindl.) Iridifolia Rchb. f. var. α. β et γ. ° 208. no. 1.
— Lindleyana Rchb. f. ° 210. no. 10.
— Lobbiana Rchb. ° 216. no. 45.
— longibracteata Rchb. f. ° 209 no. 8.
— lunata Bl. 210. no. 13.
— microphylla Rchb. ° 215. no. 35.
— miniata Rchb. ° 215. no. 34.
— myriantha Rchb. ° 212. no. 23.
var. ° l. c.
— nutans Willd. (s.) 631. no. 1.
— obcordata Rchb. ° 216. no. 43.
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— platycaulon Rchb. f. ° 209. no. 9.
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— setifera Rchb. f. ° 210. no. 11.
— Sikkimensis Rchb. ° 212. no. 22.
— spathulata Rchb. ° 215. no. 38.
— similis Bl. ° 216. no. 46.
— spiralis Rchb. ° 215. no. 40.
— (Oberonia) Tahitensis Rchb. f. ° 209. no. 4.
— tenuis Rchb. f. ° 211. no. 16.
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— truncata Rchb. f. ° 210. no. 12.
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γ. densiflora °
δ. Khasyana °
ε. gigantea °
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— ? barbata Engelm. ° 34. no. 4.
— bicolor Lehm 35. no 9.
— calcarata Engelm. in pl. Lindh. ° 37. no. 23.
— compacta Engelm. 36 no. 19.
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— hemisphaerica Engelm. pl. Lindh. (s.) 35. no. 10. β.
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var. α. applanata Engelm. °
var. β. hemisphaerica Engelm. °
— lasiacantha Engelm. ° 33. no. 2.
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var. α. borealis Engelm. °
var. β. caespitosa Engelm. °
var. γ. robustior Engelm °
— Nuttallii in pl. Lindh (s) 36 no. 15. α.
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— pectinata Engelm. ° 36. no. 20.
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— Pottsii Scheer ° 37. no. 25.
— pusilla DC. var. Texana Engelm. ° 34. no. 3.
— radiosa Engelm. pl. Lindh. (s.) 38. n. 28.
var. a — c.
— recurvispina Engelm. 36. no. 18.
— robustispina Schott (Engelm.) ° 36. n. 17.
— Scheeri Mühlenpf. β. ? valida Engelm. ° 36. no. 16.
— scolymoides Scheidw. 37. no. 22.
— similis Engelm. pl. Lindh. (s.) 36. no. 15 β.
— sphaerica Dietr. (Engelm.) 35. no. 13.
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— strobiliformis Mühlenpf. ? (non Scheer) (s.) 37. no. 23.
— sulcata Engelm. (s.) 37. no. 23.
— tuberculosa Engelm. ° 37. no. 26.
— vivipara Haw. 37. no. 28.
var. α. vera Engelm. °
var. β. radiosa Engelm.
a. radiosa borealis; b. rad. Neo-Mexicana; c. rad. Texana.
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— lanata Pl. et Lind. (s.) 418. no. 1.
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var. α. Gardneriana Hnst. ° †
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— Caveana H. f. et Th. ° IV. 40. no. 1.
— Candollei Wall. non Bl. (s.) IV. 42. no. 3.
— insignis Bl. IV. 40. no. 2.
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— (Palma) Arecina Mart. 814. no. 176. †
— saccifera Gaert. 814. no. 174. †

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Maranta Bl. VI. 32.
— arundinacea L. (s.) 26. no. 1.
— composita hort. (s.) VI. 30. no. 6.
— ? compressa A. Dietr. (s.) VI. 30. n. 2.
— dealbata A. Dietr. (s.) 30. no. 7.
— eximia L. Math. (s.) 35. no. 1.
— Jacquini Röm. et S. (s.) 30. no. 8.
— leptostachya Reg. et Körn. ° 34. n. 3.
— leptostachya hort. (s.) VI. 30. no. 5.
— Luschnathiana Reg. et Körn. ° VI. 33. no. 2.
— Luschnathiana hort. (s.) VI. 30. no. 3.
— lutea Jacq. (s.) 30. no. 8. †
— secunda hort. Edinb. (s.) 32. no. 1.
— setosa A. Dietr. (Körn.) ° 32. no. 1.
— speciosa hort. (s.) VI. 30. no. 5.
— virgata Wall. 35. †
— Warscewiczii Planch. ° 34. no. 4. † (an Phrynium eximium Koch et Bouché ?)
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Marara Karst. ° V. 819.
— bicuspidata Karst. ° 849. no. 1.
— erinacea Karst. ° 849. no. 2.
Marathrum H. B. K. (Tul.) ° V. 777.
— foeniculaceum Tul. 777. no. 2. †
— lacunosum Garda. ° 778. no. 6
— oxycarpum Tul. 777. no. 3.
— pauciflorum Tul. 777. no. 1. †
— Schiedeanum Cham. 778. no. 4.
— utile Tul. ° 778. no. 5 †
Marckea L. C. Rich. V. 586.
Margaranthus Schlchtd. V. 570.
— tenuis Miers 570. †
Margarita Bellidiastrum Gaud. (s.) V. 172. no. 1. †
Marggraviaceae Juss. IV. 367.
Marica Northiana Gawl. (s.) VI. 46. n. 1. †
Marina Liebm. ° IV. 478.
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Marlea Roxb. (A. Gray) ° IV. 819.
Marrubium L. V. 688.
— Friwaldskyanum Boiss. ° 688. no. 4.
— Hermonis Boiss. ° 688. no. 3.
— Libanoticum Boiss. ° 688. no. 2.
— Malcolmianum Dalz ° 689. no. 6.
— micranthum B. et Heldr. 688. no. 1.
— polyodon Boiss. 689. no. 5.
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— affinis Rich. ° 503. no. 1.
— longiflora A. Rich. ° 503. no. 3.
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Martynia perennis L. sp. (s.) V. 428. no. 1.
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— amanda Rchb. f. et Warsc. ° 190. n. 12.
— Arminii Lind. et Rchb. ° 189. no. 5
— atropurpurea Rchb. et Warsc. ° 192. no. 21.
— Bonplandi Rchb. f. ° 191. no. 19.
— buccinator Rchb. f. ° 193. no. 29.
— caudata Lindl. ° 189. no. 4.
— Cayennensis Rchb. f. ° 190. no. 11.
— Cinnamomea Rchb. f. ° 194. no. 30.
— civilis Rchb. et Warsc. ° 191. no. 16.
— coccinea Linden. Rchb. f. ° 192. no. 24.
— Echidna Rchb. f. ° 195. no. 35.
— elephanticeps Rchb. f. et Warsc. ° 192. no. 20. †
— ensata Rchb. f. ° 191. no. 18.
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— mastodon Rchb. f. ° 194. no. 31.
— melanoxantha Lind.; Rchb. f. ° 194. no. 31.
— militaris Rchb. et Warsc. ° 190. no. 6.
— minuta Lindl. ° 189. no. 7.
— Ochthodes Rchb. f. ° 195. no. 36.
— pumila Poepp. Endl. Rchb. f. ° 190. no. 8.
— polyantha Lindl. Rchb. f. ° 193. no. 28.
— racemosa Lind.; Rchb. f. ° 193. no. 27.
— rosea Lindl.; Rchb. f. ° 192. no. 23.
— sceptrum Rchb. f. ° 194. no. 32.
— Schlimii Lind., Rchb. f. ° 194. no. 33.
— Surinamensis Focke (s.) 189. no. 7.
— Tovarensis Rchb. f. ° 192. no. 22.
— triangularis Lindl. 188. no. 1.
— verrucosa Rchb. f. ° 195. no. 34.
— Wageneriana Lindl. ° 188. no. 2. †
Massowia C. Koch ° V. 898.
— cannaefolia C. Koch 898. no. 1.
Mastigophorus Cass. V. 312.
— Gaudichaudii Cass. 312. no. 1.

Mastostigma Stocks ° V. 498. †
— varians Stocks ° 499. no. 1. †
Mathiola R. Br. IV. 191.
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— Courrantia DC. pr. (s.) 246. no. 4.
— decipiens C. Koch ° 245. no. 1.
— discoidea DC. 246. no. 5.
— inodora L. 246. no. 3.
var. eligulata Seem. °
— lamellata Bge. ° 245. no. 1.
— Pyrethroides DC. (s.) 246. no. 4.
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Mattia Schult. V. 555.
— Aucheri DC. 556. †
— eriantha Ledeb. ° 555. no. 1.
— incana Ledeb. ° 556. no. 2.
— leptophylla DC. 556. †
— umbellata C. Koch (s.) 555. no. 1.
— umbellata DC. pr. (fl. Ross.) ° 556. n. 3.
— umbellata β. Armeniaca DC. pr. (s.) 555. no. 1.
Maundia F. Müller ° VI. 4.
— triglochinoides F. Müll. ° VI. 4. no. 1.
Maurandia Ort. V. 420.
— Barclayana Lindl. var. rosea Gardn. 420. †
Mauria Knth. IV. 446.
— (Tapirioides) multiflora Mart. (Benth.) ° 446. no. 1.
Mauritia Linn. f. V. 834.
— armata Mart. 834. no. 576. †
— flexuosa Linn. 834. no. 575. †
— vinifera Mart. 834. no. 574. †
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— acicularis Herb. ° 531. no. 82. †
— acuminata Lindl. f. ° 512. no. 18.
— acutifolia Lindl. ° (s.) 525. no. 63.
— acutipetala Hook. bot. M. ° 520. n. 38. †
— affinis h. Petrop. (s.) 511. no. 15.
— ? aggregata Lindl. (s.) VI. 486. n. 2.
— alba Lindl. 535. no. 98.
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— alpestris Lindl. 538. no. 108.
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— angustifolia Hook. ° (s.) 537. no. 106. †
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— articulata Kl. ° (s.) 526. no. 63.
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— aurantiaca R. Galeotti ° 928. in add.
— aureofulva Hook. (s.) 549. no. 9. †
— barbata Westc. (s.) 549. no. 7.
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— Batemani Poepp. et Endl. ° 516. n. 30. †
— Boothii Lindl. ° 529.
— brachyglossa Rich. et Gal. ° 528.
— brachypus Rchb. f. ° 507. no. 2.
— bractescens Lindl. ° 509. no. 9.
— brevifolia Rchb. f. ° 540. no. 116.
— breviscapa Pöpp. Endl. ° 523. no. 51. †
— brevispatha K. (s.) 604. no. 15.
— Brocklehurstiana Lindl. (s.) 615. no. 1.
— brunnea Lindl. (Rchb.) ° 522. no. 48.
— callichroma Rchb. f. ° 518. no. 32.
— candida G. Lodd. ° 515. no. 25.
— Cassapensis Rchb. f. ° 539. no. 113.
— cepula Rchb. f. ° 530. no. 80.
— chlorantha Lindl. ° 522. no. 47. †
— Christobalensis Rchb. f. ° 532. no. 87.
— ciliata Poepp. Endl. (s.) 606. no. 21. †
— coelia Rchb. f. ° 511. no. 16.
— Colleyi Batem. ° 507. no. 1.
— colorata Rchb. f. ° 523. no. 54.
— concava Lindl. ° 511. no. 14.
— consanguinea Kl. ° (s.) 519. no. 37.
— corrugata Lindl. ° 508. no. 3.
b. Wageneri ° 508. no. 3.
— costata Lindl. bot. reg. (s.) 606. no. 20.
— crassifolia Rchb. 529. no. 77.
— cristata Lindl. (s.) 615. no. 1.
— crocea Lindl. ° 522. no. 45. †
— crocea Poepp. Endl. ° 528. no. 74. †
— cucullata Lindl. ° 521. no. 43. †
— curtipes Hook. ° 524. no. 58. †
— decolor Lindl. ° 510. no. 11. †
— deflexa Kl. ms. ° (s.) 520. no. 40.
— densa Lindl. (s.) 468. no. 7.
— densifolia Rchb. ° 534. no. 97.
— Deppii Lodd. (s.) 602. no. 10. †
— Desvauxiana Rchb. f. ° 524. no. 55.
— discolor Rchb. f. ° 529. no. 79.
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— exigua Regl. (s.) 491. no. 18.
— flagellifera Lindl. in hort. (s.) 551. n. 1.
— floribunda Lindl. ° 533. no. 92.
— foveata Lindl. ° 510. no. 13.
— Friedrichsthalii Rchb. f. ° 518. no. 20.
— funerea Lindl. ° 529. no. 75.
— fuscata hort. (s.) 525. no. 63.
— fuscata Kl. (s.) VI. 520. no. 37.
— ? galeata Scheidw. ° 536. no. 64.

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— Galeottiana Rich. et Gal. ° 528.
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— graminea Lindl. (s.) 552. no. 2.
— graminifolia Rchb. ° 538. no. 109.
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— Guareimensis Rchb. f. ° 534. no. 96. var. purpureovinosa Rchb. l. c.
— Harrisoniae Lindl. (s.) 547. no. 3.
— hastulata Lindl. ° 527. no. 71.
— hematoglossa Rich. et Gal. (s.) 522. no. 44.
— Henchmanni Bot. m. ° (s.) 537. no. 106.
— heraldica Rchb. f. ° 594. no. 94.
— heteroclita Poepp. Endl. ° 527. no. 68. †
— Heynderyxii Morr. ° (s.) 605. no. 17.
— histiologorum Rchb. f. ° 514. no. 22.
— hyacinthina Rchb. f. ° 511. no. 15.
— infausta Rchb. f. ° 591. no. 86.
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— jugosa Lindl. (s.) VI. 553. no. 1.
— laevilabris Lindl. ° 528. no. 72.
— lancifolia Rchb. f. ° 539. no. 112.
— lentiginosa Lindl. (s.) 659. no. 17.
— leontoglossa Rchb. f. ° 509. no. 7.
— lepidota Lindl. ° 525. no. 61.
— leptosepala Hook. bot. mag. ° (s.) 517. no. 31.
— leucantha Kl. (s.) 608. no. 13.
— liliacea Lall. Lex. (s) 555. no. 2.
— Lindeniana Rich. et Gal. 526. no. 66. †
— longibracteata Rchb. f. ° 540. no. 115.
— longipes Lindl. ° 519. no. 35.
— longissima Lindl. ° 516. no. 27.
— lorifolia Rchb. f. ° 524. no. 57.
— luteo-alba Lindl. ° 516. no. 29.
— luteorubra Rchb. f. ° 539. no. 114.
— lutescens Scheidw. ° (s.) 511. no. 1.
— Lyonii Lindl. ° 525. no. 59.
— Macleei Batem. ° 532. no. 89.
— macrophylla Poepp Endl. (s.) 602. n. 12.
— madida Lindl. ° (s) 580. no. 80.
— marginata Fenzl ° 520. no. 40. †
— Mathewsii Lindl. ° 525. no. 62.
— Matthewsii Rchb. f. ° 539. no. 110.
— Meleagris Lindl. ° 521. no. 42.
— Melina Lindl. ° 527. no. 70.
— Meridensis Lindl. ° 533. no. 93.
— monoceros Kl. ° (s.) 520. no. 37.
— nana Hook. ° (s.) 530. no. 81. †
— nigrescens Lindl. ° 518. no. 33.
— notylioglossa Rchb. ° 527. no. 69.
— nutans Lindl. ° 519. no. 36.
— ochroleuca Lodd. 522. no. 46.
Maxillaria pallidiflora Hook. B. mag. 5[illegible] no. 12.
— palmifolia Lindl. (s.) 510. no. 11.
— Pamplonensis Lind. (Rchb.) ° 535. n. 102.
— Pantherina Rchb. f. ° 533. no. 91.
— Parkeri Hook. bot. m. 524. no. 55.
— parvula Hook. (s.) 547. no. 2. †
— Pastensis Rchb. f. ° 531. no. 85.
— penduliflora Fenzl ° 521. no. 41. †
— pentura Lindl. ° 519. no. 34.
— picta Hook. B. M. ° 519. no. 35. † var. brunnea ° l. c.
— placanthera Hook. (s.) 554. no. 2.
— platypetala R. et P. 585. no. 98.
— polyphylla Rchb. f. ° 539. no. 111.
— poneranthe Rchb. f. ° 536. no. 105.
— porrecta Lindl. ° 523. no. 60.
— praetexta Rchb. f. ° 536. no. 103.
— procurrens Lindl. (Rchb.) ° 535. n. 102.
— pubigera Kl. ° (s.) 547. no. 3.
— pulla Lindl. ° VI. 523. no. 50.
— pumila Hook. ° 529. no. 76. †
— punctulata Kl. ° (s.) 520. no. 40.
— purpurascens Knw. et West. ° (s.) 547. n. [illegible]
— purpurata Rchb. f. ° 538. no. 105.
— racemosa Hook.; Lodd. (s.) 548. n. 6.
— rebellis Rchb. f ° (s.) 507. no. 1. †
— revoluta Kl. ° (s.) 537. no. 106.
— rhombea Lindl. ° 522. no. 44.
— ringens Rchb. f. ° 523. no. 53.
— Rollissonii Lindl. (s.) 659. no. 19.
— rubrofusca Kl. ° (s.) 518. no. 33.
— rufescens Lindl. ° 525. no. 63.
— ? rugosa Scheidw. ° 526. no. 65.
— saxatilis Rchb. ° 535. no. 101.
— scabrilinguis Lindl. ° 508. no. 5.
— sessilis Lind. ° 526. no. 67.
— setigera Lindl. ° 517. no. 31.
— Skinneri Lindl. (s.) 602. no. 7.
— splendens Poepp. et Endl. ° 515. n. 25. †
— spilotantha Rchb. f. ° 534. no. 95.
— squalens Hook. Bot. mag. 510. no. 12.
— stachyobiorum Rchb. f. ° 509. no. 6.
— stapelioides Lk. (s.) VI. 658. n. 14. †
— Steetii Hook. ° (s.) 551. no. 1. †
— stenobulbum Klotzsch (s.) VI. 510. n. 12.
— stenopetala Kn. and Westc. ° (s.) 5[illegible] no. 9. †
— stenophylla Rchb. f. ° 531. no. 84.
— subulata L. 531. no. 83.
— supina Endl. Poepp. (s.) 510. no. 16.
— Surinamensis Focke (s.) 492. no. 15.
— tenuifolia Lindl. ° 532. no. 88. †
— tetragona Lindl. (s.) 602. no. 8.
— triangularis Lindl. ° 533. no. 90.

tillaria tricolor Lindl. ° (s.) 581. no. 40.
tricolor Kl. (s.) 603. no. 14.
Truxillensis Rchb. f. ° 509. no. 8.
uncata Lindl. ° 530. no. 81. †
variabilis Bat. ° 586. no. 106. †
var. unipunctata Lindl. ° (s.) 587. no. 106.
venusta Lindl. ° 514. no. 23. †
violaceopunctata Rchb. 524. no. 78.
virguncula Rchb. f. 522. no. 49.
viridis Lindl. (s.) 553. no. 2.
vitellina Lindl. (s.) 549. no. 7.
Wageneri Rchb. f. ° (s.) 508. no. 3.
Warreana Lodd. Lindl. Hook. (s.) 664. no. 1. †
xanthina Lindl. (s.) 659. no. 18. †
ximiliana Mart. V. 824. 853.
crassispatha Mart. 824. no. 389.
elegans Karsten ° 853. no. 1.
insignis Mart. 824. no. 390. †
(cf. Scheelea insignis Karst. ° 855. no. 6.)
regia Mart. 824. no. 388. †
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aculeata Royle IV. 171. no. 3.
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Nipalensis DC. IV. 171. no. 5.
robusta H. et Th. ° IV. 171. no. 4.
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Wallichii Hook. ° IV. 171. no. 6. †
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- Braunii Godr. et Gr. ° 473. no. 1.
- crassispina Vis. (s.) 474. no. 5.
- laciniata All. var. integrifolia Godr. ° 474. no. 3.
- littoralis Ten. (non Rhode) (s.) 473. n. 1.
- microdon Ehrenb. (s.) 474. no. 4.
- Murex W., Gussone (s.) 474. no. 5.
- obscura Retz β. microdon Vis. ° 474. no. 4.
- tribuloides Desr. in Lam., Vis. 474. n. 5. †
Medinilla Gaud. IV. 808.
- heterophylla A. Gray ° 808. no. 1. †
- Javanensis Bl. 809. no. 3. †
- rhodochlaena A. Gray ° 809. no. 2.
- Sieboldiana Planch. 809. no. 4. †
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- polyandra Strach et Winterb. ° IV. 207. no. 1. †
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- maximum Lindl. (s.) 259. 61.
- oxypterum Lindl. (s.) 258. 57.
- velutinum Lindl. (s.) 259. 58. †
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- trinasutum Rchb. f. ° 859. no. 1. †
Melaleuca Linn. IV. 824.
- aestuosa Forst. (syn.) 826. no. 10.
- lancifolia Turcz. (s.) 824. no. 1.
- minor Smith 824. no. 1.
- villosa Linn. f. et alior. (s.) 827. n. 10. var. α.
- viridiflora Bl. (s.) 824. no. 1.
Melampodium L. V. 214.
- cinereum DC. pr. (A. Gr.) 214. no. 3. var. ramosissimum A. Gr. °
- flaccidum Benth. ° 214. no. 2.
- leucanthemum Torr. et Gr. (s.) 214. no. 3.
- longicorne A. Gr. ° 214. no. 1.
- ramosissimum DC. pr. (s.) 214. n. 3. var
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- Setabénse Gay in sched. pl. exs. IV. 291. no. 1.
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- asperum Bl. 819. no. 3. †
- bibracteatum DC. (s.) 797. no. 3.
- brachyodon Naud. 819. no. 2. †
- elata Sw. (s.) 707. no. 5.
- erectum Bl. (s.) 818. no. 1. α.
- erectum Jack (s.) 818. no. 1. η.
- favosum DC. (s.) 727. no. 113.
- globuliferum Schlchtd. et Cham. (s.) 713. no. 36.
- Mexicanum hort. (s.) 803. no. 3.
- polyanthum Bl. 818. no. 1.
var. α. mollis Bl.
var. β. riparia Bl.
var. γ. collina Bl.
var. δ. Rayeri Bl.
var. ε. ternifolia Bl.
var. ζ. elliptica Bl.
var. η. Tondanensis Bl.
- ramiflora Sw. (s.)? 775. no. 12.
- rubra hort. (s.) 808. no. 2.
- salicifólia Bonpl. ined. (s.) 739. no. 189.
- sessile Spreng.? (s.) 753. no. 10.
- sessilifolium L. (s.) 706. no. 2.
- silvaticum Bl. 819. no. 4. †

Melastoma subtriplinervium Lk. et Otto (s.) 808. no. 3. †
— tomentosum Bonpl. (s.) 706. no. 1. †
Melastomaceae R. Br. IV. 695.
Melhania Forsk. IV. 327.
Melhaniae sp. Schlechtend. 327. no. 1.
Melia L. IV. 386.
— Japonica Don, Hassk. ° 386. no. 1.
Meliaceae Juss. IV. 386.
Melica L. VI. 1021.
— argentea E. Desv. ° 1024. no. 11.
— ciliata Vill. (non L.) (s) 1024. no. 13.
— cretica Boiss. et Heldr. ° 1022. no. 4.
— eligulata Boiss. ° 1023. no. 7.
— filiculmis Em. Desv. ° 1023. no. 9.
— Hohenackeri Boiss. ° 1022. no. 5.
— humilis Boiss. ° 1021. no. 1. et 2. †
— Magnolii Godr. et Gr. 1024. no. 13.
— micrantha B. et Hohen. ° 1021. no. 3.
— paecilantha E. Desv. ° 1023. no. 10.
var. β. umbrosa °
— pannosa Boiss. ° 1022. no. 6.
— Persica β. caspica Griseb. (s.) 1022. no. 5.
— rectiflora Boiss. et Heldr. ° 1023 no. 8.
— violacea Cav. 1024. no. 12. †
var. β. pallida E. Desv. °
Melicope Forst. IV. 410.
— barbigera A. Gray ° 410. no. 2. †
— cinerea A. Gray ° 410. no. 1. †
— ? elliptica A. Gray ° 411. no. 4.
— ? grandifolia A. Gray ° 411. no. 5.
— spathulata A. Gray ° 410. no. 3.
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Meliosmeae Endl. IV. 381.
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— Peruviana Moq. (s.) 740. no. 1.
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— aristata A. Gray ° 324. no. 2.
— odorata Lin. f. ° 324. no. 1.
— rhodocalyx C. Koch et Bouché 324. no. 4.
— vitiensis A. Gray ° 324. no. 3.
var. β. l. c.
Melodinus Forst. V. 490.
— fusiformis Champ. ° 489. no. 1.
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— suaveolens Champ. ° 490. no. 30.
Melodorum Don (Hook. et Th.) ° IV. 57.
— bicolor H. et Th. ° IV. 59. no. 7.
— elegans H. et Th. ° IV. 61. no. 13.
— fulvens H. et Th. ° IV. 59. no. 8.
Melodorum Griffithii H. et Th. ° IV. 5[illegible] no. 9.
— lanuginosum H. et Th. ° IV. 5[illegible]
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— manubriatum H. et Th. ° IV. [illegible]
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— polyanthum H. et Th. ° IV. 60. no. [illegible]
— prismaticum H. et Th. ° IV. 60. no. [illegible]
— rubiginosum H. et Th. ° IV. 58. no. [illegible]
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— verrucosum H. et Th. ° IV. 58. no. [illegible]
— Wallichii H. et Th. ° IV. 59. no. [illegible]
Melothria L. IV. 854.
— Samoensis A. Grey ° 854. no. 1.
Memecyleae (Melastomaceae [illegible]) Naud. ° IV. 799.
Memecylon acuminatissimum Bl. ° [illegible] no. 22.
— acuminatum Sm. 805. no. 41.
— ambiguum Bl. ° 814. no. 19.
— amplexicaule Roxb. (Naud.) ° [illegible]
— angulatum DC. 804. no. 35.
— angustifolium Wght. 805. no. 43.
— appendiculatum Bl. ° 815. no. 24.
— buxifolium Bl. 812. no. 39.
— Caldereense A. Gray ° 817. no. 31. †
— Calleryanum Naud. ° 803. no. 24.
— Capense Eckl. et Zeyh. 805. no. 48.
— capitellatum Bl. ° 811. no. 2.
— capitellatum L. 804. no. 31.
— capitellatum Spanoghe (s.) 812. no. 1.
— clausiflorum Naud. ° 803. no. 21.
— coeruleum W. Jack 805. no. 44.
— confine Bl. ° 812. no. 10.
var. β. Bunggang Bl. °
— confusum Bl. ° 816. no. 31.
— crassinerve Bl. 817. no. 34.
— cordatum Desr. 800. no. 5.
— cordatum Lam. 816. no. 32.
var. β. brevipes.
var. γ. subrotundum.
var. δ. pedunculosum
— cordatum Wall. Cat. (s.) 804. no. 21.
— costatum Miq. (Bl.) ° 814. no. 27.
var. β. flabellatum Bl. °
var. γ. ellipsoideum Bl. °
— Cumingii Naud. ° 802. no. 19.
— depressum Benth. (s.) 804. no. 28.
— dolichophyllum Naud. ° 808. no. 4.
— dumosum Naud. ° 802. no. 13.
— edule Roxb. 804. no. 29.
— Elaeagni Bl. 812. no. 5.
— excelsum (Bl.) ° DC. 815. no. 28. et 805. no. 39.

Memecylon fascicularе Naud. 805. no. 58.
— ferreum Bl. ° 813. no. 16. et 805. n. 42.
— floribundum Bl. ° 815. no. 27.
— garcinioides Bl. ° 813. no. 13.
var. β. elongatum Bl. °
— glomeratum Bl. ° 812. no. 8.
— grande DC. (s.) 804. no. 28.
— grandifolium Naud. ° 809. no. 3.
— Griffithianum Naud. ° 809. no. 22.
— hepaticum Bl. ° 818. no. 11.
— heteropleurum Bl. ° 816. no. 29.
— Heudelotii Naud. ° 800 no. 1.
— Heyneanum Benth. ° 805. no. 48.
— Jambosioides Wight 805. no. 46.
— intermedium Bl. ° 818. no. 15.
var. longipes Bl.
— laevigatum Bl. ° 813. no. 14.
— Loureirii Naud. 805. no. 50.
— laurifolium Naud. ° 803. no. 26.
— laurinum Bl. ° 814. no. 18.
— laxiflorum DC. 805. no. 88.
— ligustrifolium Champ. ° 817. no. 37.
— ligustrinum Naud. ° 802. no 15.
— lilacinum Zoll. et Mor. 804. no. 33.
— lutescens Naud. ° 801 no 10.
— Manillanum Naud. ° 803. no. 25.
— marginatum Bl. ° 817. no. 35.
— melastomoides Naud. ° 800. no. 1.
— micranthum Bl. ° 814. no. 20.
— myricoides Naud. ° 801. no. 11.
— myrsinoides Bl. ° 812. no. 6.
— myrtiforme Naud. ° 801. no. 12.
— Myrtilli Bl. ° 818. no. 12.
— nigrescens Hook. 805. no. 47.
— nudum Bl. ° β. ligustrinum Bl. ° 815. no. 25.
— oleaefolium Bl. ° 814. no. 17.
— oligoneurum Bl. ° 811. no. 1.
— ovatum Sm. 808. no. 40.
— paniculatum Jack. 802. no. 18.
— pauciflorum Bl. ° 812. no. 7.
— Pervilleanum Naud. ° 802. no. 14.
— prasinum Naud. ° 803. no. 23.
— prunifolium Naud. ° 801. no. 9.
— pseudo-nigrescens Bl. ° 812. no. 9.
— punctatum Presl 808. no. 51.
— pyrifolium Naud. ° 804. no. 27.
— rhamnoideum Naud. ° 802. no. 16.
— Roborеum Naud. ° 801. no. 8.
— ? scutellatum Naud. 805. no. 49.
— Spathandra Bl. ° 813. no. 28.
— sphaerocarpum DC. 810. no. 39. et 804. no. 37.
— strumosum Naud. ° 801. no. 7.
— subquadrangulare DC. 804. no. 36.
Memecylon terminale Dalz. ° 817. no. 36.
— Thouarsianum Naud. ° 800. no. 6.
— tinctorium Koen. (Naud.) ° 804. no. 30.
— tinctorium W. et Arn. exp. (s.) 811. n. 3.
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— umbellatum Gaertn. (s.) 811. no. 2.
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— hirsutum L. (s.) 128. no. 4.
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— leucantha Sw. 786. no. 9.
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— majalis Benth. 786. no. 10.
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— obtusifolia DC. (s.) 786. no. 1.
— purpurea Tussac 786. no 2.
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— Colensoi Hook. f. ° 826. no. 6.
— collina A. Gray 826. no. 10.
var. α. villosa A. Gray °
var. β. glaberrima A. Gray °
var. γ. Vitiensis A. Gray °
— comosa Roxb. (Miq.) ° 826. no. 8.
— diffusa Sm. 826. no. 4.
— diffusa A. Cunningh. (s.) 826. no. 3.
— diffusa Hook. et Arn. ? (non Sm.) (s.) 827. no. 10. β.
— florida Sm. 826. no. 1. †
— hypericifolia A. Cunn. 826. no. 3. †
— lucida Menz. (Hook.) ° 826. no. 2.
— lutea A. Gray ° 827. no. 11. †
— macropus Hook. et Arn. (A. Gray) ° 827. no. 14. †
— Molucca Rumph. (s.) IV. 441. no. 3.
— polymorpha Gaud. (A. Gray °) 827. n. 13.
var. α. A. Gray °
var. β. A. Gray °
var. γ. A. Gray °
var. δ. A. Gray °
var. ε. A. Gray °
var. ζ. A. Gray °
— robusta A. Cunn. 826. no. 7. †
— rugosa A. Gray ° 827. no. 12. †
— salicifolia A. Cunn. pr. p. (s.) V. 483. no. 2.
— stipularis D. Hook. (s.) IV. 823. no. 1.
— suberosa Roxb. (Miq.) ° 826. no. 9.
— vera Rumph. (s.) 824. no. 1.
— villosa var. glaberrima Bertero (s.) 827. no. 10. β.
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— filare Mart. 833. no. 569.
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— glabrum Desf. ° 590. no. 1.
— intermedium Zipp. (s.) 590. no. 1.
— macrophyllum Bl. ° 591. no. 4.
Mezoneurum pallescens Desf. ° 591. no. 2.
— ? sulfureum Miq. ° 591. no. 6.
— Sumatranum W. et Arn. ° 591. no. 5.
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— minima Desv. 938. no. 2.
Michelia L. IV. 38.
— aurantiaca Wall. Wight (s.) IV. 38. n. 2.
— Cathcartii H. et Th. ° IV. 38. no. 1.
— Champaca L. ° IV. 38. no. 2.
— Champaca Wall. (s.) IV. 40. no. 8.
— Doltsopa (s.) DC. IV. 38. no. 2.
— excelsa Bl. ° IV. 39. no. 3.
— glauca (s.) Wight. IV. 40. no. 8.
— Kisopa Ham. ° IV. 39. no. 5.
— lactea (s.) Ham. IV. 39. no. 6.
— lanuginosa Wall. ° IV. 39. no. 4.
— Nilagirica Zenk. ° IV. 40. no. 8.
var. β. Walkeri H. et Th. ° IV. 40. no. 8.
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— pubinervia (s.) Bl. IV. 38. no. 2.
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— acalephoides Naud. ° 732. no. 142.
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— aegrotans Naud. ° 733. no. 150.
— aeruginosa Naud. ° 712. no. 31.
— agyna Naud. ° 739. no. 185.
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— centrophora Naud. ° 732. no. 145.
— cernua Naud. ° 731. no. 139.
— chaetodon Naud. ° 712. no. 29.
— Chamissois Naud. ° 724. no. 95.
— chionophila Naud. ° 740. no. 192.
— chrysopetala Naud. ° 739. no. 187.
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— speciosa Klotzsch (s.) 761. no. 116. 7.
— spectabilis Lindl. ° (s.) 759. no. 116. 3. †
— stellata Lindl. ° (s.) 758. no. 116. 1. †
— Warscewiczii Rchb. f. (s.) 763. no. 116. 9.
Miltoniastrum Rchb. f. (s.) 781. no. 130.
Mimosa L. IV. 615.
— asperata L. 615. no. 3.
— dysocarpa Benth. ° 617. no. 8.
— flexuosa Benth. ° 616. no. 7.
— Grahami A. Gray ° 615. no. 4.
— hamata Willd. 615. no. 2.
— hispidula Knth. (s.) 615. no. 1.
— montana Hassk. Cat. (s.) 615. no. 2.
— pudica L. 615. no. 1.
— Uruguayensis Hook. et Arn. 617. †
— Wrightii A. Gray * 615. no. 5.
Mimosa zygophylla Benth. ° 616. no. 6.
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— luteus Linn. varietates 628. †
— ? radicans Hook. f. ° 627. no. 1.
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— campestris Loefl. (s.) IV. 252. no. 5.
— montana Loefl. (s.) IV. 252. no. 4.
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— heterophylla Turcz. ° 209. no. 1.
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Mithradatea amplifolia Boj. (s.) IV. 65. no. 2.
— quadrifida Willd. (s.) IV. 85. no. 1.
— Tambourissa Boj. (s.) IV. 86. no. 8.
Mitopetalum speciosum Bl. (s.) VI. 269. 11.
— bicorne Bl. (s.) 270. no. 12.
— plicatum Bl. (s.) 270. no. 16.
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— Malaccensis Wight (s.) 508. no. 1. †
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— paniculata Wall. 507. no. 2. †
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— ? excelsa H. et Th. ° IV. 55. no. 3.
— macrantha Hassk. ° IV. 55. no. 4.
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Mnemion Palmense Webb (s.) IV. 233. n. 6.
Mniopsis Tul. ° V. 786.
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— scaturiginum Mart. et Zucc. 786. no. 1.
— Weddeliana Tul. 786. no. 2. †
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— Guiso Blanco (s.) 388. no. 6.
— Malaanonan Blanco (s.) 338. no. 8.
— Mangachapoi Blanco (s.) 338. no. 7.
— Magapis Blanco fl. Fil. (s.) 338. no. 5.
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— vernicifiua Blanco (s.) IV. 335. no. 1.

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— intricata Willd. ° IV. 259. no. 4. †
var. rivularis Willk. ° IV. 259. n. 4. †
— pentandra Gay ° IV. 259. no. 2. †
— trinervia Clairv. ° IV. 259. no. 3. †
— trinervia var. pentandra Webb (s.) IV. 259. no. 2.
Moenchia Ehrh. IV. 264.
octandra Gay (Willk.) ° IV. 264. n. 1. †
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— membranacea Vr. 372. no. 2.
— microphylla Vr. ° 373. no. 7. †
— pilosa Vr. 372. no. 1. †.
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— semiamplexicaulis Vr. 372. no. 3. †
— striata Vr. ° 373. no. 4.
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— companulacea Tul. ° 107. no. 11.
— cinerea Tul. ° 105. no. 5.
— clavigera Tul. ° 108. no. 19.
— elegans Tul. ° 109. no. 21.
— floribunda Tul. ° 106. no. 6.
— gracilis Tul. ° 105. no. 4.
— Hügeliana Tul. ° 109. no. 22.
— Ibaguensis Tul. ° 106. no. 8. †
— lanceolata Rz. et P. ° 110. no. 25.
— latifolia P. et Endl. ° 110. no. 24.
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— ligustrina Tul. ° 108. no. 17. †
— longifolia Tul. ° 106. no. 9. †
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— ovata R. et P. (Tul.) ° 104. no. 1.
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— repanda R. et Pav. (Tul.) ° 105. no. 2.
— tomentosa Tul. ° 110. no. 26.
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— flavescens Anders ° 9. no. 1.
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b. ramosa
— gracillima And. 9. no. 2.
— verticillata var. β. Hook. ? (s.) 9. no. 1.
Momordica ? Ser. (s.) IV. 855. no. 1.
— mixta Roxb. (s.) 867. no. 1.
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— elegans Thw. ° 334. no. 1. †
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— Stanburiana Torr. 210. no. 1. †
Monotropa L. V. 458.
— Hypopitis L. 458. no. 1. †
α. hirsuta Roth. †
β. glabra Roth. †
Monoxora spectabilis Wight ill. (s.) IV.
833. no. 1.
— laxifolia Benth. (s.) 833. no. 1.
— Nageli Moritzi in herb. Zoll. (s.) 833.
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Monstera Adans. (Schott) V. 895.
— acuminata C. Koch. ° 896. no. 3.
— Adansonii Schott ° 896. no. 1.

Monstera cannaefolia C. Koch. (s.) 888. n. 1.
— dilacerata C. Koch. ° 897. no. 10.
— fenestrata Schott ° 897. no. 11.
— Friedrichsthalii Schott ° 896. no. 2.
— Jacquini Schott ° 896. no. 4.
— Klotzschiana Schott ° 896. no. 7.
— Lennea C. Koch ° 895. no. 1.
— lingulata Schott (s.) 890. no. 35.
— microstachys Schott ° 896. no. 6.
— tenuis C. Koch ° 897. no. 9.
— Velloziana Schott ° 896. no. 5.
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— comosa Benth. 643. ad 3.
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— Elkii Mart. et Zucc. 643. ad 1.
— Grandiflora Mart. et Z. 643. ad 1.
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— Kunthiana Mart. et Z. 643. ad 2.
— multiflora Benth. 643. ad 4.
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— fugax Ten. (s.) VI. 46. no. 1.
— Northiana Ker Lodd. Schneevogt (s.) 46. no. 1.
— Sisyrinchium Gawl. (s.) 46. no. 1. †
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— fragrans Rz. et P. 805. no. 25. †
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— parviflora Kar. et Kir. 140. no. 1.
— Persica L. 140. no. 2.
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— atropurpurea Hook. ° (s.) 580. no. 7.
— atropurpureum Lindl. ° 581. no. 11. †
— brachystachia Kl. ° (s.) 579. no. 3.
— buccinator Lindl. ° 578. no. 3.
— Cartoni Hook. ° 580. no. 6.
— Colossus Rchb. f. ° 581. no. 8.
— convolutum Lindl. ° 581. no. 9.
— flavidum Klotzsch ° (s.) 578. no. 3.
— histrix Lindl. Rchb. f. 582. no. 15.
— Hookeri Lem. j. fl. 580. no. 7.
— lentiginosa Hook. ° (s.) 578. no. 3.
— igneum Lindl. ° 579. no. 4. †
— leucochila Kl. ° (s.) 579. no. 3.
— lineatum Batem. ° 582. no. 14. †
— luxatum Lindl. ° 577. no. 1. †
— macranthum Lindl. ° (s.) 581. no. 8.
— marmorea Kl. (s.) 579. no. 3.
— Ocannae Lind. et Rchb. ° 581. no. 12.
— pardina Bat. ° 582. no. 13. †
— speciosum Lind. ° 580. no. 5. †
— vitellina Kl. ° (s.) 578. no. 3.
— Wageneriana Kl. (s.) 578. no. 3.
— Wendlandi Rchb. f. ° 581. no. 10.
— Warscewiczii Kl. ° (s.) 582. no. 14.
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— acutiflora Naud. ° 806. no. 3.
— arborea Gardn. 807. no. 16.
— brevipes Naud. ° 806. no. 5. †
— cauliflora DC. 807. no. 9.

Mouriria Domingensis Walp. 807. no. 14.
— Guianensis Aubl. 806. no. 2.
— grandiflora DC. 807. no. 10.
— Mexicana DC. 807. no. 11.
— Myrtilloides Poir. 807. no. 8.
— parvifolia Benth. 807. no. 18.
— polyantha Miq. 807. no. 12.
— princeps Naud. ° 806. no. 1.
— Pusa Gardn. 807. no. 15.
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— obovata Korth. (s.) 835. no. 11.
— orbiculata Hook. 832. †
— smilacifolia Wall. Cat. (s.) 831. no. 1.
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— pubescens Miq. ° 830. no. 2.
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— Vitiensis A. Gray ° 831. no. 6. † var. β. A. Gray °
Nelsonia R. Br. (Oerd.) ° V. 645.
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— canescens var. β. Nees. (s.) 645. no. 2.
— Nummulariaefolia R. et Schult. 645. no. 4. †
— Senegalensis Oerd. ° 645. no. 3. †
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— tigrinum Lindl. (s.) 794. no. 151. et 829. no. 18.
— tripudians Rchb. ° 830. no. 19.
— triumphans Rchb. f. ° 831. no. 23.
— umbrosum Rchb. f. (s.) 785. no. 114. et 829. no. 15.
— variegatum Rchb. f. ° 851. no. 82.
— Wageneri Rchb. f. ° 841. no. 58.
— Warscewiczii Rchb. f. ° 844. no. 67.
— Zebrinum Linn. (s.) VI. 709. no. 16.
— zebrinum Rchb. (s.) 839. no. 47. in adnot.
Odontostigma Rich. ° V. 477.
— Galeottianum Rich. ° 478. no. 1.
Oeceoclades Lindl. VI. 895.
— flexuosa Lindl. ° (s.) 898. no. 14.
— funale L. O. (s.) 902. no. 16.
— maculata Lindl. (s.) VI. p. 642.
— pusilla Lindl. ° (s.) 898. no. 13.
— tenera L. O. 895. no. 1.
Oenanthe Lam. V. 68.
— Bannatica Heuff. ° 68. no. 2.
— diffusa Lag. ? (s.) 68. no. 1.
— Kunzei Willk. ° 68. no. 1.
— marginata Vis. ° 68. no. 3.
Oenocarpus Mart. V. 806. no. 837.
— Bacaba Mart. 807. no. 45. †
— Batava Mart. 806. no. 44. †
— circumtextus Mart. 807. no. 47. †
— distichus Mart. 806. no. 42. †
— Mapora Karst. ° 837. no. 1.
— minor Mart. 807. no. 45. †
— Tarampabo Mart. 806. no. 43. †
Oenone longifolia Tul. olim (s.) V. 771. no. 1.
Oenothera Lin. IV. 676.

Oenothera albicaulis Nutt. var. subcinerea A. Gr. ° 677. no. 7.
— brachycarpa A. Gray ° 676. no. 1.
— campylocalyx Koch et Bouché ° 677. n. 6.
— chamaenerioides A. Gray ° 676. no. 3.
— primiveris Gray ° 677. no. 5.
— tubicula A. Gray ° 676. no. 2.
var. demissa °
— Wrightii A. Gr. ° 676. no. 4.
Oenothereae Endl. IV. 675.
Oeonia ? alata A. Rich. (s.) VI. 896.
— Auberti Lindl. (s.) 900. no. 3.
Ofaiston Rafin. (Bge.) ° V. 798.
Oglifa Cass. V. 288.
— arvensis Cass. 288. †
— minima Rchb. 288. †
— neglecta Rchb. 288. †
Olacacineae Herit. IV. 352.
Oldenlandia Linn. V. 116.
— acerosa A. Gray ° 116. no. 1.
— angustifolia var. A. Gr. 117. no. 4.
— humifusa A. Gr. 117. no. 3.
— rubra A. Gr. 117. no. 2.
Olea Tournef. V. 483.
— apetala A. Cunn. pr. non Vahl (s.) 483. no. 1.
— consanguinea Hance? (s.) 484. no. 3.
— Cunninghamii Hook. f. ° 483. no. 1.
— europaea L. 483. no. 5. †
α. Oleaster †
β. sativa †
— lanceolata Hook. f. ° 483. no. 3.
var. α. Hook. °
var. β. Hook. f. °
— montana Hook. f. ° 483. no. 2. †
— marginata Champ. ° 483. no. 4.
— Walpersiana Hance? (s.) 484. no. 3.
Oleaceae Lindl. V. 481.
Olearia Moch. V. 178.
— angustifolia Hook. f. ° 178. no. 3.
— Colensoi Hook. f. ° 178. no. 4. †
var. α. Hook. f. ° (tab.)
var. β. Hook. f. °
— ? grandiflora Hook. f. ° 179. no. 7. †
— Gunniana Hook. f. ° 179. no. 6. †
— Lyallii Hook. f. ° 178. no. 5.
— Operina Hook. f. ° 178. no. 1.
var. α. Hook. °
var. β. Hook. °
— ? pannosa Hook. f. 179. no. 8. †
— semidentata Decaisne ° 178. no. 2.
Oleineae ° V. 481.
Oligodorella Turcz. ° V. 244.
Oligodorella teretifolia Turcz. ° 244. n. 1.
Olneya A. Gray ° IV. 587.
— Tesota A. Gray ° 587. no. 1.
Omphalodes Tournef. V. 555.
— longiflora DC. pr. (s.) 539. no. 1.
— longiflora DC. pr. (s) 550. no. 1.
— Luciliae Boiss. (Jaub. et Sp.) 555. †
Oncidium Sw. VI. 699.
— (sectionum et specierum analysis.) 700.
— abortivum Rchb. f. 810. no. 186.
— acinaceum Lindl. ° 726. no. 52. †
— acrobotryum Klotzsch (s.) 774. no. 120.
— aemulum Rchb. f.; Lindl. ° 705. no. 8.
— albo-violaceum Rich. et Gal. (s.) 736. no. 72.
— altissimum Sw. ° 791. no. 150. †
— amictum Lindl. ° 728. no. 58. †
— amoenum A. Rich. ° 817. (spec. incert.)
— ampliatum L. O. ° 744. n. 90. †
— anceps Rchb. f. ° 758 n. 116. 2. †
— ansiferum Rchb. f; Lindl. ° 798. n. 162.
— anomalum Rchb. f. ° 805. n. 180.
— armillare Lindl. ° 806. n. 182.
— ascendens Lindl. ° 720. n. 43. †
— aureum Lindl. ° 732. n. 67. †
— auriferum Rchb. f. ° 806. n. 181.
— aurosum Rchb. f. ° 742. n. 85. b.
— Barbacense Lindl. ° 752. n 109.
— barbatum Lindl. ° 723. n. 47. †
a) verum. b) ciliatum. c) limbatum. d) fimbriatum.
— barbatum Paxt. (s.) 722. n. 46.
— Barkeri Lindl. (s.) 794. n. 157. †
— Batemannianum Kn. and Westc.; Lindl. ° 808. n. 185.
A. spilopterum l. c.
A. ramosum l. c.
— Baueri Lindl. ° 792. n. 154. †
— bicallosum Lindl. ° 785. n. 135. †
— bicolor Lindl. ° (s.) 737. no. 74. †
— bicornutum Hook. (s.) 735. no. 70.
— bidens Rchb. f. ° 769. no. 116. l.
— bifolium Sims. ° 736. no. 73. †
— Blancheti Rchb. f. ° 787. no. 78.
— Boothianum Rchb. f. ° 779. no. 126.
— brachiatum Rchb. f. ° 768. no. 116—i.
— brachyandrum Lindl. ° VI. 753. no. 111. †
— brachyphyllum Lindl. (s.) 720. no. 42. †
— bracteatum Rchb. f. ° 786. no. 139.
— Brassia Rchb. f. Lindl. fol. 765. no. 116. a
— brevifolium A. Rich. ° 817. (sp. inc.)
— caesium Rchb. f. ° 796. no. 159. †
— cariniophorum Rchb. f. ° 792. no. 153.
— Caldense Rchb. f. ° 802 no. 171.

Oncidium candidum Rchb. f. ° 768. no. 116. 8.
a. laxa Lindl. † } l. c.
b. flavescens Hook. † } l. c.
c. Jeniachiana Rchb. † } l. c.
— ? candidum Lindl. 727. no. 53.
— candidum Lindl. (s.) 699. no. 1.
— cardiochilum L. F. ° 743. no. 87.
— cardiostigma Rchb. f. ° 789. no. 146.
— carinatum Knowl. Westc. 772. n. 116. w.
— Carthaginense Swz.; Lindl. ° 781. no. 130.
A. Swartzii. B. Oerstedii. C. sanguineum. D. Klotzschii.
— caudatum Rchb. f. ° 766. no. 116. d.
— Cavendishianum Batem. ° Lindl. ° 784. no. 134. †
— Cebolleta Sw. ° 720. no. 42.
— Cepula Hoffmgg. (s.) 720. no. 42.
— cerebriferum Rchb. f. ° 805. no. 179.
— cheirophorum Rchb. f. ° 776. no. 124.
— chrysomorphum Lindl. 811. no. 189.
— chrysopyramis Rchb. f.; Lindl. ° 747. n. 97.
— cimiciferum Rchb. Lindl. ° 712. no. 22.
— cinnabarinum Rchb. f. ° 770. no. 116. p.
— citrinum Lindl. ° 788. no. 143. †
— Clowesii Rchb. f. ° 760. no. 116. 5.
a. pardina °
b. castanea °
— cocciferum Rchb. f.; Lindl. ° 712. n. 23.
— cochleatum Lindl. ° 732. no. 66. †
— Columbiae hort. (s.) 775. no. 123.
— concolor Hook. ° 731. no. 65. †
— confragosum Lindl. (s.) 737. no. 77.
— convolvulaceum Lindl. (s.) 742. no. 83.
— cordatum Lindl. ° 702. no. 2.
— cornigerum Lindl. ° 727. no. 55. †
— corynephorum Lindl. ° 711. no. 19. †
— crispum Lodd. ° VI. p. 729. no. 61. †
— crista galli Rchb. f.; Ldl. ° 746. n. 96.
— cruciferum Rchb. f. ° 804. no. 178.
— cucullatum Lindl.
a. maculosum } ° 733. 34. n. 69.
b. sanguinolentum } ° 733. 34. n. 69.
c. spathulatum } ° 733. 34. n. 69.
d. nubigenum } ° 733. 34. n. 69.
e. macrochilum } ° 733. 34. n. 69.
— cucullatum ? Rchb. (s.) 817.
— cultratum Lindl. ° 786. no. 137.
— cuneatum Scheidw. ° 726. n. 51.
— cuneatum Lindl. (s.) 782. no. 131.
— curtum Lindl. ° 730. no. 63. †
— decipiens Lindl. (s.) 747. no. 96.
— deltoideum Lindl. ° 750. no. 113. †
— delumbe Lindl. ° 801. no. 169. †
— dentatum Klotzsch ° (s.) 724. no. 48.
Oncidium diceratum Lindl. ° 706. no. 11.
— dichromaticum Rchb. f. ° 804. no. 176.
— digitatum Lindl. ° (s.) 801. no. 167.
— disciferum Lindl. ° 738. no. 78.
— divaricatum Lindl. ° 774. no. 119. †
— echinatum H. B. K. ° 739. no. 82. b.
— emarginatum E. Mey; L. O. ° 817. (sp. inc.)
— ensatum Lindl. ° 808. no. 175.
— examinans Lindl. ° 713. no. 25.
— excavatum Lindl. ° 742. no. 85. †
var. aurosum l. c.
— falcipetalum Lindl. ° 704. no. 7.
— fasciferum Rchb. f. ° 787. no. 140.
— (Xanthoglossum) festatum Rchb. ° (s.) 733. no. 67.
— filipes ? Rchb. (s.) 817.
— filipes Lindl. (s.) 752. no. 110. β. †
— fimbriatum Lindl. 727. no. 54.
— flabelliferum Pinel ° 730. no. 64. b.
— flavescens Rchb. f. ° 757. no. 116. l. †
— flexuosum Sims. ° 739. no. 81. †
— flexuosum Lindl. Sert. (s.) 712. no. 22.
— Forbesi Hook. Mag. ° 728. no. 60. †
— Forkelii Scheidw. ° 817. no. 931.
— formosissimum Rchb. f.; Lindl. ° 745. no. 92.
— foveatum Lindl. ° 807. no. 183.
— funereum Ll.; L. O. ° 817. (sp. inc.)
— funereum Lindl. ° (s.) 796. no. 158. †
— fuscatum Rchb. ° 763. no. 116. 9.
— galeatum Scheidw. ° 921.
— gallopavinum Morren ° (s.) 808. no. 185. A.
— Gardneri Lindl. ° 728. no. 57.
— Geertianum Morr. (s.) 802. no. 170.
— Ghiesbreghtianum A. Rich. ° 818. (sp. inc.)
— Gireoudianum Rchb. f. ° 768. no. 116. h.
— globuliferum H. B. K. ° 981. suppl.
— glossomystax Rchb. f. ° 714. no. 27.
— glumaceum Rchb. f. ° 760. no. 116. s.
— gracile Lindl. ° 731. no. 106.
— graminifolium Lindl. ° 752. no. 110. †
A. holochilum
B. filipes
C. Wrayae
— Guibertianum A. Rich. ° (s.) 716. n. 32.
— guttatum Rchb. f. 782. no. 131.
A. olivaceum B. guttatum C. atratum
D. intermedium E. Morreni
— guttulatum Rchb. f. ° 804. no. 177.
— haematochilum Lindl. ° 788. no. 132. †
— haematochrysum Rchb. ° 739. no. 64.
— haematoxanthum Rchb. f. 739. no. 82.
— halteratum Lindl.; Rchb. ° 706. no. 10.
— Harrisonianum Lindl. ° 774. no. 120. †

Oncidium Hartwegii Lindl. ° 730. no. 181.
— hastatum Lindl. ° 812. no. 192.
A. flavescens.
B. stratum.
— hastiferum Rchb. f. ° 703. no. 3.
— Helenae Rchb. f. ° 771. no. 116. s.
— (Xanthoglossum) hemichrysum Rchb. ° 733. no. 67. b.
— Henekenii Lindl. ° 715. no. 29.
— herbaceum Rchb. f. ° 772. no. 116. u.
— heteranthum Poepp. ° p. 811. no. 187.
— hians Lindl. ° 775. no. 122.
— hieroglyphicum Rchb. 745. no. 94.
— Huntianum bot. Mag. ° (s.) 781. n. 130. C. †
— Jamiesoni Lindl. ° 744. no. 91. †
— Janeirense Rchb. f. ° 722. no. 45. b.
— imbricatum Rchb. f. ° 770. no. 116. o.
— incurvum Bark. ° 786. no. 72. †
— Insleayi Bark. (s.) 808. no. 12. †
— intermedium Knowl. Westc. (s.) 783. no. 181. D.
— ionosmum Lindl. ° (s.) 794. no. 157.
— Josetianum Rchb. f. ° 830. suppl.
— iricolor Rchb. f.; Lindl. ° 748. no. 88.
— iridifolium H. B. K. (s.) 714. no. 26.
— iridifolium Lindl. (s.) 747. no. 96.
— isopterum Lindl. ° 786. no. 80.
— junciifolium Lindl. (s.) 720. no. 42.
— Kappleri Rchb.; Lindl. ° 792. no. 152.
— Karwinskii Lindl. (s.) 812. no. 62. †
— Kellianum Rchb. f. ° 770. no. 116. 9.
— Klotzschianum Rchb. f. ° (s.) 808. n. 170.
— Klotzschii Lk. (s.) 781. no. 130. D. †
— Kramerianum Rchb. f. ° 816. no. 197. b. †
— labiatum Rchb. f. ms. 741. no. 82. d.
— lacerum Lindl. (s.) 719. no. 40.
— lunatum Lindl. ° 753. no. 112. †
— lanceanum Lindl. ° 784. no. 138. †
— lancifolium Lindl. ° 748. no. 99.
— Leiboldi Rchb. f. ° 718. no. 38. b.
— Lemonianum Lindl. ° 716. no. 32.
— lentiginosum Rchb. f. ° Lindl. 790. n. 148.
— leopardinum Lindl. ° (s.) 781. no. 129.
— leopardinum Lindl. 745. no. 93.
— leucochilum Batem. ° 800. no. 167. †
— leucostomum Hoffmgg. (s.) 775. n. 122.
— Limminghii Morr. 816. no. 198.
— Lindeni hort. (s.) 775. no. 123.
— lineoligerum Rchb. f. ° 790. no. 149.
— linguiforme Lindl. Orch. ° 786. no. 114.
— linguiforme Lindl. (s.) 829. no. 15.
— longifolium Lindl. (s.) 720. no. 42.
— longipes Lindl. ° 722. no. 45. †
— Loxense Lindl. ° 711. no. 20.
— Lawrenceanum Rchb. f. ° 768. no. 116. c. †
Oncidium lucidum Henchmanni Kn. et Westc. (s.) 781. no. 130. C. †
— macrantherum Hook. bot. mag. ° 740. no. 82. c. †
— macranthum Lindl. ° 702. no. 1.
— macropetalum Lindl. sert. ° 725. n. 49.
— macropetalum Lindl. (s.) 724. no. 48.
— macropterum A. Rich. et Gal. (s.) 797. no. 161.
— maculatum Lindl.
a. herbaceum
b. Russellianum
c. parviflorum
d. Lindleyi — 754. no. 113.
e. vinosum
f. psittacinum
g. Donianum
— maculosum Lindl. ° 787. no. 75. †
— Magdalenae Rchb. ° Lindl. ° 749. n. 102.
— maizaefolium Lindl. ° 803. no. 173.
— mandibulare Lind. Rchb. f.; Lindl. ° 708. no. 14.
— Martianum Lindl. ° 736. no. 71. †
— meirax Rchb. f. ° 719. no. 160.
— mentigerum L. F. 756. no. 115.
— micranthum Skinner in hort. (s.) 750. no. 114.
— microchilum Batem. ° 711. no. 21. †
— microglossum Klotzsch ° (s.) 723. n. 47.
— micropogon Rchb. ° 723. no. 46.
— microstigma Rchb. f.; Lindl. ° 798. n. 163.
— mirabile Rchb. f. ° 717. no. 34.
— mirabile Rchb. f.; Lindl. 820. no. 7.
— miserrimum Rchb. f. ° 756. no. 116.
— nanum Lindl. ° 751. no. 107. †
— nebulosum Lindl. ° 802. no. 170.
— nigratum Lindl. ° 751. no. 105.
— nubigenum Lindl. ° (s.) 733. no. 69.
— nudum Batem. ° 719. no. 39. †
— oblongatum Lindl. ° 801. no. 168. †
— obovatum Presl ° 817. no. 831. suppl.
— obryzatum Rchb. f.; Lindl. ° VI. p. 746. no. 95.
— obsoletum roseum hort. Petr. 783. n. 131. D.
— Ocanense Rchb. f. ° 769. no. 116. m.
— ochmatochilum Rchb. f. ° 813. no. 193.
— Oerstedii Rchb. f. (s.) 781. no. 130. B.
— olivaceum H. B. K.; L. O. ° 817. (sp. inc.)
— onustum Lindl. ° 717. no. 35.
— orgyale Rchb. Lindl. ° 709. no. 17.
— ornatum roseum hort. Petr. (s.) 783. no. 181. D.
— ornithocephalum L. f. 749. no. 101.
— ornithorhynchum H. B. K. ° 811. n. 188. †
— pachyphyllum Hook. ° (s.) 784. n. 134. †

Oncidium pallidum Lindl. ° (s.) 774. n. 120.
— panduriferum H. B. K. (s.) 781. n. 130. C. †
— pantherinum Hoffmg. (s.) 774. no. 120.
— Papilio Lindl. ° 815. no. 197. †
— pardalis Rchb. f. ° 789. no. 145.
— pauciflorum Lindl. (s.) 717. no. 36.
— Pavonii Rchb. f. ° 705 no. 7. (bis).
— pectorale Lindl. ° 729. no. 62. †
— pelicanum Mart. (s.) 795. et 796. no. 158. †
— pentadactylon Lindl. ° 785. no. 136.
— pentaspilum Hoffmgg. (s.) 774. no. 120.
— pergameneum Lindl. ° 814. no. 196.
— Peruvianum Rchb. f. ° 767. no. 116. e.
— phymatochilum Lindl. ° 812. no. 191. †
— pictum H. B. K. ° 744. no. 89.
— picturatum Rchb. f. ° 788. no. 144.
— Pinellianum Lindl. ° (s.) 809. n. 185. B.
— Pirarense Rchb.; Lindl. ° 797. no. 160.
— planilabre Lindl. ° 787. no. 141. †
— polyadenium L. F. ° 743. no. 86.
— polychromum Scheidw. ° 930. suppl.
— polycladium Rchb.; Lindl. ° 799. n. 164.
— psittacinum Linden (s.) 734. no. 113. f.
— pubes Lindl. ° 735. no. 70.
— pulchellum Hook. ° 716. no. 31.
— pulvinatum Lindl. ° 773. no. 118.
— Pumilio Rchb. f. ° 715. no. 28.
— pumilum Lindl. ° 751. no. 106. †
— pusillum Rchb. f. ° 714. no. 26.
— pyramidale Lindl. ° 747. no. 98.
— quadricorne Kl. ° (s.) 775. no. 122.
— racemosum Rchb. f. ° 771. no. 116. t.
— ramosum Lindl. ° (s.) 809. no. 185. B. †
— raniferum Lindl. ° 813. no. 194. †
— rariflorum Ach. Rich. ° 817. (sp. inc.)
— reflexum Lindl. ° 795. no. 158.
— refractum Rchb. f.; Lindl. ° 707. n. 13.
— Reguellii Rchb. f. ° 760. no. 116. 4.
— Reichenbachii Lindl. ° 802. no. 172.
— retusum Lindl. ° 786. no. 138. †
— Rigbyanum Paxt. (s.) 742. no. 84.
— rupestre Lindl. ° 807. no. 184.
— Russellianum Lindl. ° 761. no. 116. 6. †
— sanguineum Lindl. var. auriculatum Reg. (s.) 783. no. 131. D.
— sanguineum Lindl. Sert. Orch. (s.) 781. no. 130. C. †
— sarcodes Lindl. ° VI. p. 930. suppl.
— sarcodes Lindl. ° 742. no. 84.
— scansor Rchb. f. ° VI. 742. no. 83.
— sciurus Scheidw. ° (s.) 774. no. 118.
— Schillerianum Rchb. ° 793. no. 155.
— Schlimii Lind.; Lindl. ° 780. no. 128a.
— scriptum Rchb. f. ° 772. no. 116. v.
— serpens Lindl. ° 775. no. 121. †

Oncidium serratum Lindl. ° 704. no. 6.
— sessile Lindl. ° 803. no. 174. †
— Skinneri Lindl. ° (s.) 807. no. 191.
— spathaceum Rchb. f. ° 770. no. 116. r.
— speciosum Rchb. f. ° 761. no. 116. 7. †
— spectabile Rchb. f. ° 759. no. 116. 1. †
a. porphyroglossa
b. radians
c. Moreliana
— sphacelatum Lindl. ° 791. no. 151. †
A. minus. B majus.
— sphegiferum Lind. 773. no. 117.
— spilopterum Lindl. ° (s.) 808. no. 185. A. †
— Sprucei Lindl. ° 719. no. 41.
— stenopetalum Kl. ° s. 810. no. 185. B.
— stipitatum Lindl. ° 719. no. 40.
— stramineum Batem. (s.) 775. no. 123.
— stramineum Lindl. ° 775. no. 123.
— suave Lindl. 797. no. 161.
— suaveolens Rchb. f.; Lindl. ° 765. n. 116. b.
— superbiens Rchb. f. ° 705. no. 9.
— superfluum Rchb. f. ° 721. no. 43. b.
— Suttoni Batem. ° 800. no. 168. †
— Tayleri hort. (s.) 797. no. 161.
— Tenense Rchb.; Lindl. ° 718. no. 18.
— tenue Lindl. ° 799. no. 165. †
— tetrapetalum Lindl. ° VI. 717. no. 35.
— tetrotis Rchb. f. ° Lindl. ° 799. no. 16[illegible]
— tigratum Rchb. f. 745. no. 93.
— tigratum Rchb.; Lindl. ° 778. no. 129.
— tigrinum Ll. et Lex. ° 794. no. 157.
— tigrinum hort. Angl. (s.) 734. n. 113. b.
— tigrinum Lex. (s.) 829. no. 13.
— tipuloides Rchb. f. ° 787. no. 142.
— trichodes Lindl. ° 722. no. 46.
— tricolor Hook. (s.) 717. no. 32. †
— trifurcatum Lindl. ° 703. no. 4.
— trilingue Lindl. ° 704. no. 5. †
— tripterygium Rchb. f. ° 728. no. 59.
— triquetrum Lindl. ° 715. no. 30. †
— Trulla Rchb. f.; Lindl. ° 713. no. 24.
— trulliferum Lindl. ° 812. no. 190. †
— umbrosum Rchb. f. (s.) 755. no. 114.
— undulatum Lindl.; Rchb. ° 709. n. 15.
— unguiculatum Kl. (s.) 732. no. 65.
— unguiculatum Lindl. (s.) 794. no. 157.
— unicorne Lindl. ° 735. no. 71.
— uniflorum Lindl. ° (Booth) 721. n. 44.
— urophyllum Lodd.; Lindl. ° 712. no. 21.
— varicosum Lindl. ° 738. no. 79. †
— variegatum Sw. ° 718. no. 38.
— variegatum Lindl.; Orch.; Lind. (l.) 718. no. 37.
— velutinum Lindl. ° 717. no. 37. †
— ventilabrum Rchb. f. ° 707. no. 12.

Oncidium verrucosum Rchb. f.; Lindl. ° 769. no. 116. k.
— villosum Rchb. f. ° 767. no. 116. g.
— viperinum Lindl. ° 737. no. 77.
— Volvox Rchb. ° 793. no. 156.
— Wageneri Rchb. f. ° 767. no. 116. f.
— Warneri Lindl. ° 776. no. 125. †
a. sordidum. b. purpuratum.
— Warscewiczii Rchb. f. ° 727. no. 56.
— Weddelli Lindl. ° 780. no. 127.
— Wendlandianum Rchb. f. ° (s.) 797. et 798. no. 161.
— Wentworthianum Batem. ° 814. n. 195. †
— Widgreni Lindl. ° 726. no. 50.
— Wrayae Hook. (s.) 752. no. 11. C. †
— xanthochlorum Klotzsch ° (s.) 801. n. 168.
— zebrinum Rchb. f.; Lindl. ° 709. n. 16.
Oncocarpus A. Gray ° IV. 445.
— Vitiensis A. Gray ° 445. no. 1 †
Oncodia Lindl. (Brachteae Rchb. sp.) 855.
— glumacea Lindl. ° (s.) 855. no. 1. †
Onobrychis Tournef. IV. 545.
— Allionii Jord. ° 546. no. 2.
— arenaria Koch synops. pr. p. (s.) 546. no. 3.
— collina Jord. ° 546. no. 4.
— dealbata Stocks 546. no. 6.
— decumbens Jord. ° 546. no. 5.
— Gaudiniana Jord. (olim) (s.) 546. no. 4.
— Nummularia J. E. Stocks ° 547. no. 7.
var. α. °
var. β. °
— pilosa Boiss. ° 545. no. 1.
— Tommasinii Jord. ° 546. no. 3.
Ononis L. IV. 462.
— alepecuroides var. trifoliata Coss. (s.) 463. no. 5.
— Arragonensis Coss. in Bourg. (s.) 463. n. 1.
— Bourgaei Boiss. et R. ° 463. no. 3.
— brachystachya Vis. ° 463. no. 6.
— Cossoniana Boiss. et R. ° 463. no. 4.
— diffusa Coss. (non Ten.) (s.) 463. n. 4.
— heterophylla Scheele ° 464. no. 7.
— monophylla Boiss., DC., non Desf. (s. 463. no. 5.
— Picardi Coss. in pl. Bourg. 463. no. 8.
— Reuteri Boiss. 462. no 1.
— Salzmanniana B. et Reut. 463. no. 5.
— Saxicola Boiss. et R. ° 463. no. 2.
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— Acanthium L. 297. †
— Illyricum L. 297. †
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Onosma strigosum Steven 550. no. 1.
Onychacanthus Nees (Oerst.) ° V. 692.
— speciosus Oerst. ° 692. no. 1.
Onychium affine Decaisne (s.) 298. no. 97.
— crumenatum Bl. (s.) 291. no. 63.
— fimbriatum Bl. Bidr. (s.) 301. no. 110.
— Japonicum Bl. (s.) 294. no. 77.
— nudum Bl. (s.) 294. no. 78.
— rigidum Bl. (s.) 291. no. 76.
— tricuspe Bl. Bidr. (s.) 301. no. 111.
Ophelia G. Don V. 516.
— pauciflora Dalz. ° 516. no. 1.
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— Indicus R. Wight 147. no. 1. †
Ophiopogoneae Knth. VI. 147.
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— Eyrii Champ. ° 117. no. 2.
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Ophioxylon L. V. 491.
— majus Hassk. 491. †
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— crus galli Knth.
var. α. vulgare / var. β. colonus } 957. no. 1.
Opuntia Tournef. V. 48.
— subg. et generis sect. conspectus 48.
— acanthocarpa E. et Bigel ° 56. n. 43. †
— angustata E. et Big. ° 50. no. 8. †
— arborescens Engelm. ° 56. no. 42.
— arbuscula Engelm ° 57. no. 47.
— arenaria Engelm. ° 58. no. 36.
— basilaris Engelm. et Big. ° 52 no. 21.
— Bigelowii Engelm. ° 56. no. 40. †
— brachyarthra Engelm. et B. ° 54. n. 28.
— bulbispina Engelm. ° 55. no 34.
— Cananchica Engelm. et B. ° 50. n. 11. †
— chlorotica E. et Big. ° 49. no. 6. †
— clavata Engelm. 54. no. 29.
— cymochila Engelm. ° (s.) 51. n. 16. (subsp.)
— Davisii E. et Bigel ° 55. no. 36. †
— dulcis Engelm. (s.) ? 49. no. 5.
— echinocarpa Eng. et Big. ° var. major ° 55. no. 36.
— Emoryi Engelm. ° 54. no. 31.
— Engelmanni Salm Dyk ° 49. no. 5.
var. ? cycloides E. et Bigelow. °
— erinacea E. et Big. ° 53. no. 25. †
— Ficus-Indica Mill 49. no. 3.
— Filipendula Engelm. ° 51. no. 16.

Opuntia fragilis Haw. 54. no. 27.
— frutescens Engelm. ° 57. no. 49.
var. longispina Engelm. °
var. brevispina Engelm. °
— fulgida Engelm. et Big. ° 56. no. 39.
— fusco-atra Engelm. ° 52. no. 17.
— fusiformis E. et Big. ° (s.) 52. n. 16. (subsp.)
— Grahami Engelm. ° 55. no. 38.
— grandiflora Engelm. ° (s.) 51. no. 16. (subsp.)
— hystericina E. et Bigel. ° 58. no. 22. †
— Lindheimeri Engelm. (s.) 49. no. 5.
— macrocentra Engelm. ° 50. no. 9.
— macrorhiza Engelm. ° (s.) 52. no. 16. (subsp.)
— mammillata Schott (Schott) ° 57. n. 44.
— microdasys Lehm. 52. no. 19.
— minor Engelm. ° 50. no. 12.
— Missouriensis DC. 58. no. 23.
var. α. rufispina E. et Big. °
var. β. platycarpa E. °
var. γ. microsperma E. °
var. δ. subinermis E. °
var. ε. albispina Engelm. et Big. °
var. ζ. trichophora Engelm. et Big. °
— Mojavensis E. et Bigel (s.) 50. no. 10. var. γ.
— occidentalis E. et Big. ° 49. no. 5. (subspecies Op. Engelmanni Salm)
— Parryi E. et Big. 54. no. 30. †
— phaeacantha Engelm. ° 50. no. 10.
α. nigricans E. °
β. brunnea E. °
γ. major E. °
— procumbens E. et Big. ° 49. no. 7. †
— prolifera Engelm. ° 56. no. 38.
— Rafinesquii Engelm. ° 51. no. 16. †
var. microsperma Engelm. °
var. montana Engelm. °
— ramosissima Engelm. (s.) 57. no. 50.
— rufida Engelm. ° 52. no. 20.
— Schottii Engelm. ° 54. no. 32.
— serpentini Engelm. ° 55. no. 37.
— setispina Engelm. ° 51. no. 14.
— sphaerocarpa Engelm. et Big. ° 53. n. 24. †
— stenochila Engelm. et Big. ° (s.) 51. no. 16. (subsp.)
— stenopetala Engelm. ° 48. no. 1.
— strigil Engelm. ° 48. no. 2.
— tessellata Engelm. ° 57. no. 50.
— Thurberi Engelm. ° 57. no. 45.
— tortispina Engelm. et Big. ° 50. n. 12. †
— Tuna Mill. 49. no. 4.
— vaginata Engelm. ° 57. no. 48.
— vulgaris Mill. (Engelm.) 52. no. 18.
Opuntia Whipplei Engelm. et Big. ° 56. no. 41. †
— Whrightii Engelm. ° 57. no. 46.
Orania Zipp. Bl. V. 809. et 811.
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— porphyrocarpa Knth. (s.) 811. no. 111.
— regalis Bl. 809. no. 78.
Orbignya Mart. V. 825.
— ? dubia Mart. ° 825. no. 410. †
— humilis Mart. 825. no. 409. †
— phalerata Mart. 825. no. 408. †
Orchidea Juss. VI. 167.
Orchidofunkia pallidiflora Rich. et Gal. (s.) VI. 698. no. 3.
Oreobliton Dur. et Moq. V. 727.
— Chenopodioides Coss. et Dur. ° 727. no. 1.
Oreochloa Lk. ° 1007.
— disticha Lk ° 1008. no. 1.
Oreodoxa Willd.; Mart. V. 807.
— acuminata Willd. 807. no. 50.
— frigida H. Knth. 807. no. 52.
— Manaele Mart. 807. no. 53.
— oleracea Mart. 807. no. 48. †
— regia Knth. Mart. 807 no. 49. †
— Sancona H. Knth. 807. no. 51.
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— Colensoi Hook. f. ° 79. no. 1.
— lasiopetala A. Gray ° 79. no. 2.
Origanum L. V. 671.
— cinereum Noe (s.) 671. no. 1.
— floribundum Munby ° 671. no. 1.
Orlaya polycarpos Kze (s.) V. 77.
Ormosia Jacks. IV. 587.
— ? pachycarpa Champ. ° 587. no. 1.
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— album Hook. (s.) 541. no. 1.
— aureum Poepp. et Endl. ° 487. no. 4. †
— bicolor Lindl. ° 489. no. 11.
— bracteatum Wall (s.) 631. no. 1.
— coccineum Salisb. 492. no. 19.
— densum Rchb. f. ° 488. no. 7.
— distichum Lindl. ° 487. no. 3.
— giganteum Lindl. ° 487. no. 4.
— Jenischianum Rchb. f. ° 490. no. 15.
— inflexum Rchb. f. ° 998. add.
— miniatum Lind. 491. no. 17.
— multicaule Rchb. f. ° 490. no. 16.
— niveum Lindl. ° 489. no. 12.
— nubigenum Rchb. f. ° 488. no. 9.

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— ruberrimum Rchb. f. ° 489. no. 14.
— sanguinolentum var. acuminatum Lindl. ° 489. no. 13.
— semiscabrum Lindl. ° 489. no. 10.
— serrulatum Lindl. ° 487. no. 5.
— Sophronites Rchb. f. ° 486. no. 1.
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— vestitum Rchb. f. ° 491. no. 18.
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— avicula Rchb. f. ° 495. no. 15.
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— Bonplandi Rchb. f. ° 494. no. 10.
— chloroleucus Rchb. f. ° 493. no. 8.
— ciliatus Lindl. ° 495. no. 12.
— elephas Rchb. f. ° 493. no. 5.
— falcatus Focke ° 494. no. 11.
— gladiatus Hook. 493. no. 2.
— grandiflorus Lindl. ° 495. no. 13.
— Ibis Rchb. f. ° 493. no. 6.
— inflexus Lindl. ° 493. no. 3.
— iridifolius Rchb. f. ° 494. no. 9.
— Krügeri Rchb. f. ° 495. no. 14.
— Mexicanus Rich. et Gal. (s.) 493. no. 3.
— myrticola Lindl. ° 493. no. 4.
Ornithochilus striatulus St. Calcutt. (s.) VI. 499. no. 11. (err. typogr. no. 1.)
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— aemulum Schott et Kotschy ° 118. n. 6.
— affine h. Berol. (s.) 117. no. 1.
— Arabicum L. (s.) 119. no. 1.
— aureum Curt. 119. †
— Cydni Schott et K. ° 118. no. 4.
— Eckloni Schlchtdl. ° 118. no. 3.
— paterfamiliás Godr. ° 117. no. 2.
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Orobanche L. V. 636.
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— bracteata Weinm.; Ledeb. ° 637. no. 5.
— erubescens Saut. ° 636. no. 2.
— hygrophila Brügger ° 636. no. 4.
— Kochii Schultz 637. no. 7.
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— album L. f. (s.) 530. no. 2.
— anomalus C. Koch ° 531. no. 2.
Orobus canescens L. f. (s.) 530. no. 3.
Orobus Kolenatii C. Koch ° 531. no. 1.
— luteus L. (s.) 530. no. 4.
— saxatilis Vent., Guss., Bertol. (s.) 530. n. 6.
— subalpinus Herb. ° 531. no. 3.
— variegatus Ten. (s.) 530. no. 5. et n. 7.
— vernus Sibth. (s.) 531. no. 7.
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— Heyneana H. et Th. ° IV. 54. no. 1.
— ? obliqua H. et Th. ° IV. 55. no. 6.
— polycarpa A. DC. ° IV. 55. no. 4.
— uniflora H. et Th. ° IV. 54. no. 2.
— Zeylanica H. et Th. ° IV. 54. no. 3.
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— amplexicaulis (s.) 499. no. 10.
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— Burmanni R. Br. β. lanatus Büse ° 958. n. 2.
— compositus R. Br. β. glabrescens Büse ° 958 no. 1.
Orthosiphon Benth. V. 668.
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Oryzopsis setacea Rich. (s.) VI. 971. n. 1.
Osbeckia Naud. IV. 808.
— jucunda DC. (s.) IV. 708. no. 10.
— stellata Don 808. †
Oserya Tul. ° V. 786.
— biceps Tul. et Wedd. 787. no. 2.
— Coulteriana Tul. 787. no. 4. †
— flabellifera Tul. et Wedd. 787. no. 1. †
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— amygdalina DC. 754. no. 2.
— birimosa Naud. ° 754. no. 1.
— brachystachya Naud. ° 754. no. 4.
— integrifolia Naud. ° 755. no. 5. var. β. latifolia.
— multiflora DC. 754. no. 3.
— purpurascens DC. (s.) IV. 733. no. 151.
— scabrosa DC. (s.) 774. no. 8.
— sculpta DC. (s.) 774. no. 5.
— sparsiflora DC. (s.) 775. no. 11.
— species e genere Ossaea exclusae 755.
Osteomeles glabrata H. B. K. (s.) IV. 670. n. 1.
Otandra cernua Salisb. (s.) VI. 682. no. 2.
Othonna angustifolia DC. pr. (s.) V. 350. n. 1.

Othonnopsis Jaub. et Sp. ° V. 350.
— angustifolia Jaub. et Sp. ° 350. no. 1. †
Otochilus (Coelogynae sect.) ° VI. 236.
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— fusca Lindl. (s.) 236. no. 51.
— porrecta Lindl. (s.) 236. no. 52.
Otosema Benth. ° IV. 579.
— caudata Benth. ° 580. no. 3.
— extensa Benth. ° 580. no. 4.
— fruticosa Benth. 580. no. 2.
— macrophylla Benth. 589. no. 1.
Otostegia Benth. V. 697.
— Arabica Jaub. et Sp. ° 697. no. 3. †
— Aucheri Boiss. 698. no. 5. †
— Benthamiana Jaub. et Sp. ° 697. no. 2. †
— microphylla Boiss. 698. no. 4. †
— Moluccoides Jaub. et Sp. ° 697. no. 1. †
Oudemansia Miq. ° IV. 319.
— hirsuta Miq. 320. no. 5.
— Javanensis Hassk. β. angustifolia Hssk. 320. no. 3.
— integerrima Miq. ° 320. no. 1.
— obversa Miq. ° 320. no. 2.
— virgata Hassk. 320. no. 4.
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— macrocarpa Hook. f. ° 632. no. 1.
Outea bijuga DC. (s.) IV. 591. no. 1.
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— Cornelli Ands. ° 402. no. 6.
— dichondraefolia A. Gray ° 401. no. 2.
— Pickeringii A. Gray ° 402. no. 5.
— Pygmaea A. Gray ° 402. no. 4.
— versicolor Planch. ° (DC.) 401. no. 1. †
— Wrightii A. Gray ° 401. no. 3.
— zonata Liebm. 402. no. 7.
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— tubiflorus DC. pr. 135. no. 1. †
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Oxycladus Miers ° V. 520.
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— calyptrata Cham. in herb. Berol. (s.) IV. 724. no. 95.
— quinquenodis Mart. (s.) 765. no. 35.
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— fornicata H. et Th. ° IV. 73. no. 4.
— glauca H. et Th. ° IV. 73. no. 30
— latifolia H. et Th. ° IV. 72. no. 1.
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— carnosum Bl. (s.) 280. no. 8. †
— excavatum Bl. (s.) 280. no. 10.
— macrostoma Hassk. (s.) VI. 279. no. 4.
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— Parvopassuae Parl. ° 496. no. 1.
— Pyrenaica Godr. et Gr. ° 496. no. 2.
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Ozothamnus R. Br. V. 277.
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— glomeratus Hook. f. ° 277. no. 1.
— microphyllus Hook. f. ° 277. no. 2. †
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— Fendleri Seem. ° 317. no. 2.
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— macrocarpa Hook. ° 318. no. 5. †
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— distichum H. B. K. ° 822. no. 1.
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— Hartwegii Rchb. f. ° 822. no. 2.
— parvifolium Lindl. ° 823. no. 5.
— Pasti Rchb. f. ° Lindl. ° 822. et 921. add.
— squarrosum Lindl. 823. no. 6.
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Pachypleurum Ldb. V. 72.
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— albiflora var. foemina Pl. IV. 31. †
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— intermedia C. A. Mey. (s.) IV. 32. n. 2.
— microcarpa Boiss. et R. IV. 32. no. 1.
— Moutan var. IV. 32. †
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Palumbina Rchb. f. ° VI. 699.
— candida Rchb. f. ° 699. no. 1.
Panargyrum Lag. V. 313.
— abbreviatum Hook. et Arn. 313. no. 1.
Panax L. V. 82.
— Colensoi Hook. f. ° 83. no. 4. †
— Edgerleyi Hook. f. ° 83. no. 3.
— ? Gaudichaudi Hook. et Arn. (s.) 84. n. 1.
— linearis Hook. f. ° 83. no. 2.
— ? ovatum Hook. et Arn. (s.) 84. n. 1.
— ? platyphyllum Hook. et Arn. (s.) 84. n. 2.
— Samoense A. Gray ° 82. no. 1.
Pancratium Parl. VI. 61.
— Amancaes Gawl. (s.) 62. no. 1.
— Illyricum L. (s.) 62. no. 1.
— tortifolium Boiss. ° 61. no. 1.
— verecundum Soland 61. †
Pandanus Linn. V. 857.
— furcatus Roxb. (s.) 858. no. 1.
— graminifolius hort. (s.) 858. no. 1.
— pygmaeus Thouars; Hook. f. ° 857. n. 1. †
— pygmaeus hort. (s.) 858. no. 1.
Pandanaceae V. 857.
Panderia Fisch. et Mey. 729.
— divaricata C. Koch in herb. (s.) 729. n. 1.
— pilosa F. et Mey. 729. no. 1.
Pangieae Bl. IV. 229.
Pangieae Clos IV. 229.
Paniceae Knth. VI. 942.
Panicum L. VI. 944.
— aemulum Steud. 951. no. 14.
— alopecuroideum L. (s.) 966. no. 19.
— ambiguum Fig. et Not. ° 957. no. 28. †.
— antipodum Spr. Steud. 951. no. 15.
— asperatum Knth. (s.) 945. no. 2.
— brevifolium L. β. filamentosum Pers. (Schlchtdl.) ° 951. no. 12.
— campylogrammum Büse ° 952. no. 21.
— centrum Willd. (Al. Br.) ° 950. no. 10.
— chamaeraphis Nees ms. non Nees (Al. Br.) ° 947. no. 5.
— colonum L. 954. no. 29. †
— coloratum L. 955. no. 40.
— cordatum Büse ° 953. no. 24.
— costatum (Roxb.) Al. Br. ° 947. no. 4.
— crus ardeae Willd. (Al. Br.) ° 949. n. 8.
α longisetum ° 949.
β brevisetum ° 949.
— crus galli L. 954. no. 30. a.
— cuspidatum Roxb. 951. no. 30. †
— delicatulum Fig. et Not. 955. no. 36. †
— dictyoneurum Fig. et de Not. ° 953. n. 25. †
— elongatum Pohr. non Pursh (s.) 949. n. 8.
— fatuum Fig. et Not. 954. no. 32. †
— Forbesianum Nees (Al. Br.) ° 948. n. 6.

Panicum fuscum Sw. (Ands.) 952. no. 18.
var. vegetius °, firmius °, pubescens ° 952. no. 18.
— Hamiltoni Knth. (s.) VI. 1018. no. 4.
— hirticaulon Presl 952. no. 16.
var. majus, minus, glabescens ° 952. no. 16.
— homonymum Steud. (s.) 947. no. 5.
— Hostii M. B. (s.) 951. no. 11.
— Javanum Büse ° (Nees ms.) 958. n. 23.
β angustifolium ° 958. no. 23.
— incomptum Fig. et de Not. 954. n. 31. †
— jubatum Fig. et Not. 958. no. 26. †
— Kleinianum Nees herb. 945. no. 2.
— Kotschyanum Hochst. 955. no. 34. †
— miliaceum L. 955. no. 39.
— minutiflorum Fig. et Not. 955. n. 35. †
— multicaulum Ads. ° 952. no. 17.
— myrianthum Büse 952. no. 20.
— Nepalense Spreng. (s.) 945. no. 2.
— nervosum Roxb. (s.) 945. no. 2.
— neurodes (Schult.mant.) Al. Br.° 945. n. 2.
α. conjungens ° 946.
β. Kleinianum ° 946.
γ. blepharoneurum ° 946.
δ. Roxburghianum ° 946.
ε. amplissimum ° 947.
ζ. lene ° 947.
η. Thwaitesii 947.
— nubicum Fig. et Not. 955. no. 37. †
— Numidianum Desf. 954. no. 30b. †
— obtusifolium Delile 955. no. 42.
var. acutifolium
— oligotrichum Fig. et Not. ° 958. n. 27. †
— oryzinum Gmel. (Al. Br.) ° 951. n. 11.
— palmifolium (Poir.) A. Br. ° 945. no. 2.
— parvum Büse ° 952. no. 19.
— pilosum Sw. (s.) 1018. no. 4.
— Poiretianum Schult. Mant. (s.) 949. n. 8.
— plicatum (Lam.) Al. Br. ° 944. no. 1.
— plicatum Fl. Ind. (s.) 945. no. 2.
— plicatum Jacq. (s.) 945. no. 2. †
— plicatum Schrank (s.) 945. no. 2. †
— plicatum Trin. (s.) 945. no. 2. †
— plicatum Willd. (s.) 945 no. 2.
— pulipes Büse ° (Nees m.) 953. no. 22.
— reticulatum Torr. 955. no. 41.
— serrarium Fig. et Not. 955. no. 33. †
— speciosum Nees (Al. Br.) ° 949. no. 9.
α. Martianum ° } 950.
β. Poeppigii ° } 950.
γ. laxum ° } 950.
— spicatum Roxb. (s.) 966. no. 19.
— stagninum Host (s.) 951. no. 11.
— sulcatum Aubl. (Al. Br.) ° 948. no. 7.
Panicum sulcatum Bertol. (s.) 949. no. 8.
— turgidum Forsk. 955. no. 38. †
— vaginatum Sw. β longipes Lgs. 953. no. 13
Panisea Lindl. ° VI. 239.
— apiculata Lindl. (s.) VI. 225. 18.
— bilamellata Lindl. ° 240. no. 4.
— parviflora Lindl. ° 240. no. 1.
— reflexa Lindl. ° 240 no. 2.
— uniflora Lindl. ° 240. no. 3.
Papaver Tournef. IV. 172.
— cornigerum Stocks ° IV. 173. no. 4.
— dubium L. β. laevigatum Bib. IV. 174. no. 6.
— inornatum Schott et Kotschy ° IV. 173. no. 2.
— lateritium C. Koch ° IV. 173. no. 1.
— nudicaule L. var. croceum Pl. IV. 174. n. 1.
— Olympicum Sibth. (s.) IV. 174. †
— pilosum Sm. IV. 174. †
— rupifragum Boiss. et R. ° IV. 172. n. 1.
— simplicifolium Don. (s.) IV. 173. no. 1.
— somniferum L. IV. 174. no. 7.
Papaveraceae DC. IV. 170.
Papayaceae Mart. IV. 868.
Paphinia Lindl. ° VI. 614.
— cristata Lindl. ° 615. no. 1.
Papilionaceae DC. IV. 452.
Papperitzia Rchb. f. ° VI. 677.
— Leibeldi Rchb. f. ° 677. no. 1.
Pappophoreae Kth. VI. 940.
Pappophorum Aucheri Jaub. et Sp. (s.) VI. 940.
Pappothrix Gray ° (Lophamiae sect.) V. 18. (an genus proprium ?)
Parabaena Miers (Hook. et Th. ° IV. 123.
— ferruginea } Miers (s.) IV. 123. n. 1.
— heterophylla } Miers (s.) IV. 123. n. 1.
— oleracea } Miers (s.) IV. 123. n. 1.
— sagittata H. et Th. ° IV. 123. no. 1.
Paracaryum DC. V, 555.
— asperum Stocks ° 555. no. 2.
— rubriflorum Stocks ° 555. no. 1.
Paraderris (Derris sect.) Miq. ° IV. 533.
Paradisanthus Rchb. f. ° VI. 506.
— Bahiensis Rchb. f. ° 506. no. 1. †
Paradrymonia Hanst. ° et Kl. ° V. 418. †
— glabra Hanst. et Kl. ° 419.
Parapetalifera odorifera Wendl. (s.) II. 418. no. 4. β. †
Parastemon A. DC. IV. 648.
— urophyllus A. DC. 648. no. 1.
Paratropia Bl.; DC. V. 85.
— ? multijuga A. Gray ° 85. no. 2.
— Samoensis A. Gray ° 85. no. 4.

Parinarium Juss. (Bl.) IV. 644.
— campestre Aubl. 644. no. 1.
— corymbosum Miq. ° 645. no. 8.
— costatum Bl. ° 644. no. 4.
— glaberrimum Hassk. 645. no. 7.
— Griffithianum Benth. (s.) 645. no. 8.
— Jackianum Benth. 644. no. 5.
— insularum A. Gray ° 644. no. 3. †
— laurinum A. Gray ° 646. no. 10. †
— Maranthes (s.) 645. (no. 8.
— ? Margarata A. Gr. ° 646. no. 12.
— multiflorum Miq. ° 646. no. 9.
— polyandrum Benth. (s.) 645. no. 8.
— salicifolium Miq. ° 646. no. 11.
— scabrum Hassk. ° 645. no. 6.
— Sumatranum Benth. ° 644. no. 2.
Paritium Adr. Juss. IV. 308.
— (sectio Azanzae) Garcke ° 306.
— elatum G. Don (s.) 306. no. 12.
— tiliaceum Adr. Juss. 308. no. 1.
— tiliaceum Wight ? (s.) 306. no. 12.
— tricuspe Guill. 308. no. 2.
Parkia R. Br. IV. 612.
— Africana R. Br. ° 612. no. 1.
— bigiobosa Benth. pr. p. (s.) 612. no. 1.
— grandis Hassk. olim (s.) 612. no. 1.
— intermedia Hassk. ° 613. no. 2.
— speciosa Hassk. ° 613. no. 3.
Parkinsonia Plum. IV. 594.
— aculeata L. ° 594. no. 1.
Parmentiera A. P. DC. V. 523. et in adnot.
— aculeata Seem. bot. Her. (s.) 523. n. 2.
— cereifera Seem. ° 523. no. 1. †
— edulis DC. 523. no. 2.
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— communis Ham. (Benth.; Miq.) 478. no. 1.
— maculatus Bennet. 478. no. 1.
— major D. Don. (s.) 478. no. 1.
— oxalidifolius Royle ill. 478. no. 1. †
Paronychieae St. Hil. IV. 244.
Parthenice Gray ° V. 215.
— mollis A. Gr. ° 216. no. 1.
Parthenium L. V. 215.
— Hysterophorus L. 215. no. 1.
var. hirto-canescens A. Gr. °
Parthenoxys Planch ° (Oxalis sect.) IV. 400.
Parvatia Decaisne IV. 140.
— Brunoniana Decne. ° IV. 140. no. 1.
Paspalum L. VI. 942.
— canescens Ands. ° 943. no. 4.
— distichum Burm. 942. no. 2.
— Gayanum Desv. ° 943. no. 3.
— littorale Br. pr. (s.) 942. no. 2. †
— orbiculatum Forst. (s.) 942. no. 1.
Paspalum scrobiculatum L. 942. no. 1.
— vaginatum Sw. (s.) 942. no. 2.
Passiflora Juss. V. 3.
— albo-nigra (var. hybr.) V. 4. †
— alata superba (hortor. var.) V. 4. †
— Belottii (hybrida) V. 4. †
— biflora Lam. V. 3. no. 5.
— capsularis L. β. acutiloba V. 3. no. 6.
— inamoena A. Gray ° V. 3. no. 3.
— Lowii Heer V. 3. no. 1. †
— Medusaea Lem. ° V. 3. no. 2. †
— penduliflora Bert. V. 4. †
— rubra L. V. 3. no. 4.
— sicyoides Schlchtd. V. 4. †
Passifloreae Juss. V. 3.
Pastinàca Tournef. V. 76.
— glauca Dalz. ° 76. no. 1.
— ? Petteri Vis. in Rchb. (s.) V. 75. no. 2.
Patonia Wight (s.) IV. 61.
— parvifolia (s.) Wight IV. 62. no. 2.
Pattonia macrantha Wight VI. 628. n. 2. †
Paullinia L. IV. 377.
— interrupta Benth. 377. no. 3.
— Meyeniana Walp. (s.) 377. no. 5.
— pachycarpa Benth. 377. no. 4.
— sorbilis Mart. ° 377. no. 2.
— spicata Benth. 377. no. 1.
Paulownia Sieb. et Zucc. V. 620.
— imperialis Sieb. et Zucc. 620. †
Pavetta L. V. 111.
— arborescens Hassk. ° 111. no. 2.
— macrophylla Bl. ? DC. 111. no. 3.
— Wijckii Hassk. ° 111. no. 1.
Pavonia Cav. IV. 303.
— alba Seem. ° 303. no. 1.
— hispida Spr. (s.) 304. no. 2.
— parviflora Desf. (s.) 304. no. 2.
— pilosa W. (s.) 304. no. 2.
— pilosa Lk. (s.) 304. no. 2.
— stellata Spr. (s.) 303. no. 2.
— Typhalea Cav. 303. no. 2.
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Pedalium Royle V. 525.
— Murex L. 525. no. 1.
Pedicularis L. V. 634.
— lanata Ledeb.; Cham.; Hook. ° 635. n. 4.

Pedicularis Langsdorfii β. Steven (s.) 635. no. 4.
— mollis Benth. 635. †
— Nordmanniana Bge. ° 635. no. 2.
— pycnantha Boiss. ° 634. no. 1.
— rostrata Georgi (s.) 635. no. 2.
— versicolor Wahl. 635. †
— verticillata Lin. 635. †
— villosa Ledeb. ° 635. no. 3.
Pedilonum biflorum Bl. (s.) VI. 286. n. 36.
Peganum L. IV. 414.
— Mexicanum A. Gray ° 414. no. 1.
Pegolettia Cass. (Jaub. et Sp.) ° V. 207. †
— Senegalensis Cass. (Jaub. et Sp.) 208. no. 1. †
Pelaphia grandifolia Bks. et Sol. ms. (s.) 103. no. 1. †
— laeta Bks. et Sol. ms. (s.) V. 103. no. 1. †
— parvifolia Bks. et Sol. ms. (s.) 105. no. 9. var. β. †
— retusa Bks. et Sol. ms. (s.) 103. n. 2. †
Pelargonium Herit. IV. 397.
Pelargonii varietatum icones 397. †
Pelea A. Gray ° IV. 417.
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— clusiaefolia A. Gray ° 417. no. 1. † var. β. et γ. A. Gray ° 417. n. 1. β. γ.
— lucida A. Gray ° 418. no. 7. †
— oblongifolia A. Gray ° 418. no. 3.
— rotundifolia A. Gray ° 418. no. 4. †
— Sandwicensis A. Gray ° 418. no. 5. †
— volcanica A. Gray ° 418. no. 6. †
Peliosanthes Andr. VI. 147.
— Courtallensis R. W. 147. †
— Neilgherrensis R. W. 147. †
Peltophyllum luteum Gardn. (s.) V. 916. no. 1.
Pemphis Forst. IV. 688.
— acidula Forst. 688. no. 1. β. ovalifolia Hassk. °
— angustifolia Roxb. (s.) } 688. no. 1.
— setosa Blanco (s) }
Penaeaceae A. DC. V. 748.
Penicillaria Sw. (A. Br.) VI. 961.
— Alopecuroides A. Br. ° 966. no. 19.
— Arabica A. Br. ° 962. no. 3.
— ciliata Willd. (s.) 966. no. 19.
— compacta A. Br. et Bouché ° 962. n. 4.
— Cordofana A. Br. et Bouché 961. no. 1.
— cylindrica R. et S. (s.) 966. no. 19.
— deflexa Ands. ° 965. no. 14.
— fallax Fig. et Not. ° 963. no. 8.
— gymnothrix Al. Br. et B. ° 966. no. 21.
— leucostachya Kl. ° 965. no. 18.
Penicillaria macrostachya Kl. ° 965. n. 16.
— Mossambicensis Kl. ° 965. no. 13.
— nigritarum Schlchtd. (s.) 963. no. 8.
— Nubica A. Br. ° 962. no. 2.
— Perrottetii Kl. ° 965. no. 17.
— Plukenetii A. Br. et B. ° 963. no. 7.
— Raddiana Fig. et Not. ° 964. no. 9.
— Roxburghii Br. et Bouché ° 966. no. 22.
— socia Br. et B. ° 964. no. 10.
— speciosa A. Br. et B. ° 963. no. 5.
— spicata W. et Schlchdl. ° 964. no. 11.
— spicata R. et Sch. (s.) 966. no. 22.
— spicata Wall. (in herb. reg. Berol.) (s.) 966. no. 20.
— stenostachya Kl. ° 965. no. 15.
— typhoidea Fig. et Not. ° 966. no. 18.
— vulpina A. Br. et B. ° 963. no. 6.
— Willdenowii Kl. ° 965. no. 12.
Pennisetum Palis. VI. 959.
— asperifolium Knth. 960. no. 3.
— ciliare Link 960. no. 4.
— dichotomum Del. 960. no. 5.
— Linnaei Knth. (s.) 966. no. 19.
— pauperum Steud. VI. 961. no. 1.
— persicum Boiss. et Reut. ° 960. no. 2.
— Tiberiadis Boiss. ° 959. no. 1.
Pentadenia Planch. ° V. 412. †
— aurantiaca H. et Klotzsch 412.
— strigosa H. et Kl. 412.
Pentanema Cass. V. 202.
— Aucheri Boiss. (s.) 202. no. 2.
— divaricatum Cass. 202. no. 1.
— Pulicariaeforme Jaub. et Sp. 202. no. 2.
? Pentapetes angustifolia Bl. (s.) IV. 323. n. 1.
Pentaphylax Gardn. et Champ. IV. 363.
— euryoides Gardn. et Champ. ° 363. n. 1.
Pentaraphia Decne. ° V. 409. †
— calycosa Decne. 409.
Pentasachme Wall. V. 504.
— Championi Benth. ° 504. no. 1.
Penstemon L'her. V. 626.
— ambiguum Torr. 627. †
— azureus Benth. 626. †
— Baccharifolius Hook. ° 626. no. 2. †
— cyananthus Hook. 627. †
— Fendleri Torr. et Gr. ° 626. no. 1.
— Gentianiodes Benth. 627. †
— heterandrum Torr. et Gr. ° 626. n. 1.
— heterophyllus Lindl. 627. †
— Wrightii Hook. ° 626. no. 1. †
Peplis Linn. IV. 685.
Pereira medica Lindl. (s.) IV. 122. no. 1.
Perezia DC. V. 316.
— adnata A. Gr. ° 317. no. 10.
— fruticosa Llave 316. no. 2.

Perdicia nudicaulis A. G. ° 316. no. 8.
— patens A. Gr. ° 317. no. 9.
var. β. Gr. °
var. γ. Gray °
— platyphylla Gray 316. no. 5.
— rigida A. Gr. 316. no. 4.
— Seemanni A. Gr. ° 316. no. 7.
—°Thurberi A. Gr. ° 317. no. 11.
— turbinata Llave 316. no. 1.
— Wrightii A. Gr. ° 316. no. 6.
var. subpuberula.
Pericampylus Miers ° IV. 128.
— incanus Miers ° IV. 129. no. 1.
Pericome A. Gray ° V. 190.
— caudata A. Gray ° 191. no. 1.
Pericycla Bl. (cont. Licuala Rumph. V. p. 843.) V. 816.
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Periploca L. V. 499.
— Graeca L. 499. †
Peristeria Hook. ° 607.
— cerina Lindl. ° 607. no. 3. †
var. guttulata Rchb. f. ° 607. no. 3.
— elata Hook.; Lindl. ° 607. no. 1.
— guttata Kn. et Westc. ° 608. no. 4. †
— longiscapa Rich. et Gal. (s.) 612. n. 1. †
— Parkeri Batem. (s.) 611. no. 8. †
— pendula Hook. ° 607. no. 2. †
Perityle Benth. V. 185.
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— Coronopifolia A. Gray ° 185. no. 1.
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Pernettya Gaud. 458. no. 441.
— Gayana Dcne. 442. no. 3. †
— leucocarpa var. Gayana DC. pr. (s.) 442. no. 3.
— mucronata Gaud. (Decsne.) ° 441. n. 1. †
— oblongifolia Hombr. (s.) 442. no. 1. †
— ovalifolia Hombr. (s.) 442. no. 1. †
— pumila Hook. 442. no. 2.
Pernicium Senecioides Bks. et Sol. V. 342. no. 38. †
Peronia stricta Dec. (s.) VI. 31. no. 7.
Perottetia H. B. K. (char. emend.) ° IV. 427.
— Sandwicensis A. Gray ° 428. no. 1.
Perowskia Karel. (Bge.) ° V. 676.
— scrophulariaefolia Bge. ° 676. no. 1.
Pescatoria (Sect. Zygopetali Hook) Rchb. ° VI. 651. no. 52.
— cerina Rchb. (s.) 652. no. 2.
— triumphans Rchb. f. (s.) 652. no. 3.
Pesomeria tetragona Lindl. (s.) VI. 468. no. 2.
Petalonyx A. Gray ° V. 5.
— Thurberi A. Gray ° V. 5. no. 1.
Petalostemon L. C. Rich. IV. 481.
— exile A. Gray ° 481. no. 1.
Petasites Tournef. V. 148.
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— fragrans Presl 148. no. 1. †
— Kablikianus Tausch ° 148. no. 5. †
— niveus Baumg. 148. no. 3. †
— spurius Rchb. 148. no. 2. †
— tomentosus DC. (s.) 148. no. 2.
— vulgaris Desf. 148. no. 6. †
Peteria A. Gray ° IV. 481.
— scoparia A. Gr. 481. no. 1.
Petermannia Klotzsch ° IV. 905. †
— Cumingiana Kl. ° 906. no. 1.
— fasciculata Kl. ° 906. no. 2.
— geniculata Kl. ° 906. no. 4.
— racemosa Kl. ° 906. no. 3.
Petilium L. VI. 108.
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Petiveria Plum. V. 741.
— tetrandra Gomez 741. †
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— Blanchetiana Schauer 709. †
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— Martiana Schauer 709. †
— subserrata Cham. 709. †
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— Lagascae Willk. 292. no. 2. †
— Pyrenaica Willk. IV. 291.
— Pyrenaica var. Gallica Willk. ° n. 1. α. †
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— Pyrenaica A. Br. (s.) 292. no. 1. α.
Petromarula A. DC. V. 394.
— pinnata DC. (Jaub. et Sp.) 394. n. 1. †
Petroselinum filiforme A. Rich. (s.) V. 65. no. 1. α.
Petunia Juss. V. 588.
— elegans Miers 588. †
— ovalifolia Miers 588. †
— parviflora Juss. 588. †
— var. Prince Camille de Rohan 588. †
— var. striata formosissima v. Houtte 588. †
— varietates hybr. 588. †
Petunieae Miers V. 560.
Peumus Boldus Mol. (s.) IV. 114. no. 1.
— fragrans Pers. et Spr. (s.) IV. 114. n. 1.
Peucedanum L. V. 75.
— Alsaticum L. (s.) 75. no. 1.
— coriaceum Rchb. (s.) 75. no. 2.
— ? geniculatum Forst. (s.) V. 72. no. 6.
— nudicaule Nutt. 75. no. 1.
var. ellipticum Torr. et Gr. °

Peucedanum Parisiense Koch syn. non DC. (s.) 75. no. 2.
— Petteri Vis. ° 75. no. 2.
Phaca Linn. IV. 495.
— mollissima Nutt. 495.
var. Utahensis Torr. 495. no. 1. †
Phacelia Juss. V. 527.
— humilis Torr. et Gr. ° 527. no. 1. †
— Popei Torr. et Gr. ° 527. no. 2. †
Phaeanthus Hook. et Th. ° IV. 73.
— nutans H. et Th. ° IV. 73. no. 1.
Phaedranassa Herb. VI. 59.
— obtusa Herb. (Reg.) ° 59. no. 1.
Phagnalon Cass. V. 197.
— rupestre DC. pr. 197. no. 3. †
— saxatile DC. pr. 197. no. 2. †
— sordidum DC. pr. 197. no. 1. †
Phajus L. VI. 458.
— albus Lind (s.) 460.
— australis F. Müll. ° 459. no. 5.
— bicolor Lindl. ° 458. no. 1. †
— Blumei Lindl. 459. no. 7. †
— callosus Bl. ° 459. no. 6. †
— cupreus Rchb. f. ° 459. no. 9.
— grandifolius Lour. 459. no. 4. †
— grandiflorus Lour. 459. no. 5. †
— indigoferus Hassk. 459. no. 8.
— maculatus Lindl. ° 460. no. 10. †
β. minor.
— rosellus Lem. (s.) 460. et 649. no. 2.
— tetragonus Rchb. f. ° 458. no. 2.
— Wallichii Lindl. 459. no. 3. †
Phalacraea DC. V. 152.
— coelestina Regel 152. no. 1. †
Phalacrodiscus Sch. Bip. (s.) V. 233. et seqq.
Phalaenopsis Bl. VI. 860.
— cornu cervi Bl. et Rchb. f. 860. no. 4.
— deliciosa Rchb. f. ° 860. no. 1.
— equestris Rchb. f. 860. no. 2.
— intermedia Lindl. ° 860. no. 3. †
— rosea Lindl. (s.) 860. no. 2. †
Phalangium Juss. VI. 136.
— attenuatum R. W. 136. †
— oligospermum R. W. 136. †
— parviflorum R. W. 136. †
— planifolium Pers. (s.) 137. n. 1.
— tuberosum Knth. 136. †
Phalarideae Knth. VI. 936.
Phalaris L. VI. 940.
— ambigua Fig. et Not. ° 940. no. 2. †
— appendiculata Schultes (s.) 940. no. 1.
— paradoxa var. α. intacta ° } 940. n. 1.
var. β. intermedia ° }
var. γ. praemorsa ° }
— praemorsa Lam. (s.) 940. no. 1. γ.
Phalaris pseudo-paradoxa Fig. et Not. ° 940. no. 3. †
Phanera Lour. IV. 603.
— bidentata Benth. 604. no. 9.
— Blancoi Benth. ° 606. no. 27.
— bracteata Benth. ° 606. no. 28.
— Championi Benth. ° 607. no. 30.
— coccinea Lour. 605. no. 20
— complicata Miq. ° 606. no. 25.
— corymbosa Korth. 606. no. 23.
— Cumingiana Benth. ° 605. no. 19.
— Cunninghami Benth. ° 606. no. 28.
— debilis Miq. ° 606. no. 24.
— diphylla Benth. 606. no. 26.
— diptera Miq. ° 607. no. 29.
— elongata Korth. 603. no. 3.
var. β Miq. °
— excelsa Bl. (Miq.) ° 603. no. 6.
— fulva Benth. 605. no. 10.
var. β. glabrior Miq. °
— glabrifolia Benth. 605. no. 17.
— glauca Benth. ° 605. no. 21.
β. pilosior Miq. °
— Griffithiana Benth. ° 604. no. 14.
— integrifolia Benth. ° 604. no. 12.
— Junghuhniana Benth. ° 605. no. 18.
— Kockiana Miq. Benth. 604. no. 11.
— lucida Benth. 603. no. 5.
— purpurea Benth. ° 603. no. 1.
— pyrrhoneura Miq. ° 604. no. 7.
— retusa Benth. 604. no. 10.
— semibifida Korth. 603. no. 4.
— stipularis Korth. 604. no. 13.
— Vahlii Benth. 605. no. 15.
— variegata Benth. ° 603. no. 2.
— velutina Benth. ° 604. no. 8.
Pharbitis Choisy V. 531.
— calycosa A. Rich. 532. no. 2.
— laciniata Dalz ° 531. no. 1.
— limbata Lindl. 532. †
— rubro-coerulea Hook. 532. †
Phaseolus L. IV. 560.
— acutifolius A. Gr. ° 562. no. 10.
— angustissimus A. Gr. ° 562. no. 12.
— decurrens Grah. (s.) 556. no. 2.
— discolor Spanoghe ° 560. no. 1. †
— gibbosus Bl. ° 561. no. 7.
— luteus Bl. ° 561. no. 6.
— macropioides A. Gr. ° 560. no. 3.
— pauciflorus Dalz ° 562. no. 9.
— rotundifolius A. Gr. ° 561. no. 4.
— scaberulus Miq. ° 561. no. 5.
— strictus A. Br. et Bouché ° 560. no. 2.
— tomentosus Ands. ° 561. no. 8.
— Wrightii A. Gr. ° 562. no. 11.

Phelipaea Tournef. V. 637.
— albiflora Gren. et Godr. ° 637. no. 1.
— pallens Bunge in litt. (Ledeb.) ° 637. no. 2.
Philadelphaceae DC. IV. 820.
Philadelphus L. IV. 821.
— Satsumi Siebold 821. no. 2. †
— serpyllifolius A. Gray ° 821. no. 1.
Philesia Commers. (Hook.) ° VI. 146.
— buxifolia Lam. 146. no. 1. †
Philetaeria Liebm. V. 530. no. 1.
Phillyrea Tournef. V. 484.
— latifolia L. 484. no. 1. †
α. ilicifolia †
β. oleoides Rchb. °
γ. ligustrina Rchb. †
δ. stricta †
— media L. 484. no. 2. †
α. ilicifolia †
β. virgata †
γ. angustifolia †
Philodendron Schott V. 883.
— advena Schott ° 884. no. 14.
— albo-vaginatum K. et Sello ° 885. n. 16.
— asperatum hort. (s.) 893. no. 8.
— Augustinum C. Koch ° 885. no. 17.
— bipennifolium Schott ° 884. no. 15.
— cardiophyllum K. et Sello ° 886. no. 21.
— crinipes h. Amstelodami (Koch) ° 886. no. 20. et 891. no. 39.
— cuspidatum K. et Bouché 888. no. 30.
— erubescens K. et Augustin ° 887. n. 25.
— eximium Schott ° 883. no. 4.
— eximium Koch et Sauer (s.) 889. n. 31. et 891. no. 38.
— fragrantissimum Hook. 890. no. 34.
— hastaefolium Regel ° 883. no. 1. et 892. no. 41.
— hastatum K. et Sello ° 887. no. 26.
— hederaceum Schott (Koch) ° 891. n. 37.
— ? hederaceum Mey. Esseq. (s.) 889. n. 32.
— latifolium C. Koch ° 890. no. 36.
— latipes Koch et Augustin ° 886. n. 23.
— linguaeforme hort. Berol. (s.) 890. n. 34.
— lingulatum Koch ° 890. no. 35.
— micans C. Koch ° 888. no. 27.
— micranthum Schott 884. no. 11.
— microphyllum C. Koch ° 888. no. 28.
— modestum Schott ° 884. no. 13
— muricatum Schott ° 884. no. 7.
— obtusifolium Miq. ° 883. no. 2.
— ornatum Schott ° 884. no. 9.
— pertusum Knth. et Bouché (s.) 895. n. 1.
— pinnatifidum Knth. 886. no. 19.
β. virescens Koch °
Philodendron Priecerianum Schott 884. no. 10.
— pterotum Koch et Augustin ° 887. n. 24.
— quinquenervium Miq. ° 883. no. 3.
— radiatum Schott ° 883. no. 5
— Ruizii Schott ° 884. no. 6.
— sagittaefolium Schott ° 884. no. 8.
— Sauerianum C. Koch ° 891. no. 38.
— scandens K. et Sello ° 886. no. 22.
— Selloum Koch ° (s.) 885. no. 18. et 890. no. 36.
— Sellowianum Knth. (Koch) ° 889. n. 32.
— Simsii Knth. (Koch) ° 890. no. 33.
— Simsii hort. nonnull. (s.) 889. no. 32.
— subovatum Schott ° 884. no. 12.
— tenue Koch et Aug. ° 888. no. 29.
— Warszewiczii C. Koch et B. ° 891. n. 40.
Philodice Mart., Knth. Steud., Körn. ° V. 921.
Phleum L. VI. 939.
— alpinum var. genuinum Wk. ° 940. n. 3.
— graecum Boiss. et Heldr. ° 934. no. 1.
— pratense var. abbreviatum Boiss. ° 940. no. 2.
Phlomis L. V. 698.
— Armeniaca Willd. var. brachyodon Boiss. ° 698. no. 1.
— chrysophylla Boiss. ° 698. no. 3.
— discolor Ledeb. ° 699. no. 4.
— lanata Willd. 699. †
— pungens Willd. 699. no. 5.
— Syriaca Boiss. ° 698. no. 2.
— Thapsoides Bunge ° 699. no. 6.
Phlomostachys Beer (s.) VI. p. 78.
— Altensteinii Beer (s.) VI. 79. no. 1.
— Altensteinii β. gigantea Beer (s.) 79. no. 1. β.
— densiflora Beer (s.) 93. no. 4.
— Funkiana Beer (s.) 79. no. 2.
— imbricata Beer (s.) 93. no. 5.
— sulphurea Beer (s.) 93. no. 3.
Phlox L. V. 527.
— canescens Torr. et Gr. ° 527. no. 1. †
— Hoodii Torr. in Stansb. Exped. (s.) 527. no. 1.
— var. Admiral Fengbergen de Vr. 527. †
— var. Roi Leopold v. Houtte 527. †
— var. hybr. Criterion v. Houtte 527. †
— var. hybr. 527. †
Phoenix Linn. V. 819. et 844.
— acaulis Roxb. 819. no. 269. †
— dactylifera Linn. 819. n. 261. † et 844. n. 1.
— farinifera Roxb. 819. no. 266.
— Loureirei Kunth 819. no. 267.
— Ouseleyana Griff. 819. no. 270.

Phoenix paludosa Roxb. 819. no. 263. †
— pusilla Gaertn. 819. no. 268. †
— reclinata Jacq. 819. no. 264. †
— silvestris Roxb. 819. no. 262. †
— spinosa Thonn. 819. no. 265.
Pholidia R. Br. V. 713.
— crassifolia F. Müll. ° 713. no. 1.
Pholidiopsis F. Müll. ° V. 713.
— Santalina F. Müll. ° 713. no. 1.
Pholidota articulata Lindl. (s.) VI. 238. n. 72. †
— calceata Rchb. f. (s.) 238. no. 69.
— camelostalix Rchb. f. (s.) 238. no. 74.
— carnea Lindl. (s.) 237. no. 62.
— chinensis Lindl. (s.) 237. no. 60.
— chinensis Lindl. (s.) 237. no. 61.
— clypeata Lindl. (s.) 237. no. 56.
— conchoides Lindl. (s.) 237. no. 59. †
— crotalina Rchb. f. (s.) 238. no. 70.
— gibbosa Lindl. (s.) 237. no. 58.
— imbricata Lindl. (s.) 238. no. 66.
— Khasyana Rchb. f. (s.) 238. no. 73.
— loricata Rchb. f. (s.) 238. no. 71.
— nervosa Rchb. (s.) 236. no. 55.
— pallida Lindl. (s.) 238. no. 68.
— Pholas Rchb. (s.) 237. no. 60.
— recurva Lindl. (s.) 237. no. 63.
— rubra Lindl. (s.) 238. no. 65.
— triotos Rchb. (s.) 238. no. 67.
— undulata Lindl. (s.) 238. no. 64.
— ventricosa Lindl. (s.) 237. no. 57.
Phoradendron Nutt. V. 91.
— chrysocladon A. Gr. ° 91. no. 2.
— Pepericarpum (pipericarpum?) A. Gr. ° 91. no. 1.
Photinia Lindl. IV. 670.
— dasythyrsa Miq. 671. no. 2.
— integrifolia var. β. subdenticulata Miq. ° var. γ. sublanceolata Miq. ° 670. n. 1.
Phragmites Trin. VI. 990.
— disticha Büse ° 990. no. 2.
— Roxburghii Büse β. conrctata Büse ° 990. no. 1.
Phrealia uniflora R. W. (s.) VI. 267. n. 3. †
Phrodus Miers V. 572.
— Bridgesii DC. pr. 572. †
— microphyllus DC. pr. ° 572. †
— nodosus DC. pr. 572. †
Phrymaceae C. Schauer V. 708.
Phrynium Willd. VI. 35.
— capitatum Willd. VI. 36. †
— compositum Lk. (s.) VI. 30. no. 6.
— discolor hort. (s.) VI. 35. no. 2.
— eximium Koch et Bouché ° VI. 35. n. 1.
— ? floribundum Lem. VI. 36. no. 4. †
— sanguineum Hook. (s.) VI. 32. no. 9.
Phrynium setosum Rosc. (s.) VI. 32. no. 1.
— spicatum Griff. VI. 36. †
— trifasciatum hort. Koch ° VI. 36. no. 1.
— varians Koch et Math. ° VI. 35. no. 1.
Phycella Lindl. VI. 59.
— Herbertiana Lindl. (Gay) ° 59. no. 1. †
Phyganthus Poepp. (s.) VI. 129. no. 1. †
Phygelius E. Mey. V. 620.
— capensis Benth. 620. †
Phyllocladus L. C. Rich. V. 801.
— alpina Hook. f. ° 801. no. 2. †
— hypophylla Hook. f. ° 801. no. 1. †
Phyllodium Desv. IV. 544.
— elegans Desv. 544. no. 2.
— pulchellum Desv. 544. no. 1.
— vestitum Benth. 544. no. 3.
Phyllodoce Salisb. V. 444.
— coerulea Gren. et Godr. 444. no. 1.
— Taxifolia DC. pr. (s.) 444. n. 1.
Phyllodoxis Planch. ° (Oxalis sect.) II. 88.
Phyllopus Martii DC. (s.) IV. 778. no. 1.
Phyllospadix Hook. VI. 3.
— Scouleri Hook. VI. 3. no. 1.
Physaleae Miers V. 559.
Physalis Don (Miers) V. 570.
— Alkekengi L. 570. †
— Curassavica L. 571.
— gracilis Miers 570. †
— Maurelloides Schlchtd. 570.
— Peruviana L. 570. †
Physalodes A. Gray ° (Sidae sect.) IV. 88.
Physinga Lindl. ° VI. 467.
— prostrata Lindl. ° 467. no. 1.
Physocalyx (Sileneae subgenus) Willk. ° IV. 277.
Physochlaena G. Don V. 587.
— Daburica Miers 587. no. 2.
— grandiflora Hook. 587. no. 6. †
— orientalis Don 587. no. 4.
var. β. affinis Miers °
— physaloides G. Don 587. no. 1.
— praealta Miers 587. no. 5.
— rubricaulis Miers 587. no. 3. †
Physodeira Kl. ° et Hanst. ° V. 410.
— bicolor Hanst. et Kl. 410.
Physoleucas Jaub. et Sp. ° V. 667.
— acrodonta Jaub. et Sp. ° 668. no. 2.
— Arabica Jaub. et Sp. ° 668. no. 3.
— pachystachya Jaub. et Sp. ° 668. no. 1.
Physoleucadis sectio 1 et 2. Jaub. et Sp. ° 668.
Physorhynchus Hook. IV. 215. †
— Brahuicus Hook. ° IV. 215. no. 1. †
Physostelma Wight V. 505.
— campanulatum Dcne. (505.)
Phytarrhiza Vis. ° VI. 69.

Phytocrhiza Durattii Vis. ° 89. no 1. †
Phytelephas Rz. et Pav. V. 834. 857.
— macrocarpa R. et Pav. 834. no. 581.
— microcarpa Rz. et Pav. (Karsten) ° 834. no. 582. et 857. no. 1.
Phytolacca Tournef. V. 741.
— esculenta var. Houtte (A. Braun) ° 741. no. 1.
— pruinosa Fenzl ° 742. no. 4.
— purpurascens A. Br. et Bouché ° 744. no. 3.
— rugosa A. Br. et Bouché ° 744. n. 2.
Phytolaccaceae Moq. Tand. V. 741.
Picramnia Swrtz. IV. 420.
— umbrosa Seem. ° 420. no. 1. †
Picrophyta Ferd. Müller ° V. 370. 383.
— albiflora F. Müll. ° 384. no. 1.
— calcarata F. Müll. ° 384. no. 2.
Picris Juss. V. 899.
— corymbosa Gren. et Godr. 322. no. 1.
— Hieracioides L. 322. no. 2. var. glabrata Hook. °
Piddingtonia A. DC. V. 391.
— Palliardii Lehm. ° 391. no. 1.
Pigafetta Mart. (Metroxyli sect.) ° V. 833.
Pilderia Klotzsch ° IV. 901. †
— urticaefolia Kl. 901. no. 1.
Piliostigma Hochst. IV. 607.
— acidum Benth. ° 607. no. 1.
— racemosum Benth. 607. no. 2.
Pilocarpus Vahl IV. 411.
— pennatifolius Lem. 411. no. 1. †
— trijugatus Lem. olim (s.) 411. no. 1.
Pilocereus Engelm. ° (Cerei subg.) V. 47.
Pilogyne? Wight (s.) IV. 855. no. 1.
Pilostyles Guill. VI. 17.
— Thurberi A. Gray ° VI. 17. no. 1.
Pilumna Lindl. (s.) VI. 678.
— fragrans Lindl. (s.) 680. no. 4.
— laxa Lindl. (s.) 680. no. 3.
— nobilis Rchb. fil. ? (s.) 680. no. 4.
— Wageneri Rchb. f. (s.) 680. no. 5.
Pimpinella napiformis Vis. sem. h. Pat. (s.) V. 81. no. 1.
Pinanga (Seaforthia R. Br.) Karst. ° V. 839.
— Junghuhnii Karst. ° 839. no. 1.
Pinanga Nenga Bl. Rumph. (s.) V. 898. no. 67.
Pinardia Cass. (char. emend.) ° V. 248.
— Coronaria Less. 248. †
Pinelia hypolepta Lindl. (s.) VI. 204. n. 3.
Pinus Linn. V. 796.
— Aculcensis Roezl 798. no. 78.
— (Abies) alba Link 799. †
Pinus Amecamensis Roezl 798. no. 77.
— angulata Roezl 798. no. 64.
— Antoineana Roezl 796. no. 17.
— Aztecaensis Roezl 797. no. 60.
— Besseriana Roezl 797. no. 41.
— Bothiana Roezl 796. no. 7.
— Boucheiana Roezl 796. no. 10.
— (Abies) bracteata Hook. ° 798. no. 87. †
— bullata Roezl 797. no. 26.
— Carrierei Roezl 797. no. 31.
— Cedrus Roezl 797. no. 52.
— (Abies) Cilicica Ant. et Kotschy ° 799. n. 88.
— coarctata Roezl 797. no. 25.
— Comonfortii Roezl 797. no. 45.
— Decaisnea Roezl 797. no. 38.
— Decandolleana Roezl 797. no. 49.
— dependens Roezl 797. no. 51.
— Dolleriana Roezl 796. no. 15.
— Don Pedrii 798. no. 89.
— elegans Roezl 796. no. 6.
— Endlicheriana Roezl 797. no. 35.
— Escandoniana Roezl 797. no. 55.
— exserta Roezl 798. no. 65.
— Geertii Roezl 796. no. 11.
— grandis Roezl 796. no. 5.
— Haageana Roezl 797. no. 29.
— hamata Roezl 798. no. 81.
— Hartwegii Roezl 797. no. 39.
— Hendersonii Roezl 797. no. 22.
— heteromorpha Roezl 798. no. 66.
— horizontalis Roezl 797. no. 28.
— Hoseriana Roezl 797. no. 53.
— Houttei Roezl 796. no. 16.
— Huisquilucaensis Roezl 797. no. 46.
— (Abies) Jeszoensis (Sieb. et Zucc.) 799. †
— inflexus Roezl 797. no. 36.
— Jostii Roezl 797. no. 21.
— Itztacihuatlii Roezl 798. no. 74.
— Ketelerii 796. no. 14.
— Larix L. 799. †
— Lerdoi Roezl 797. no. 50.
— Llaveana Schiede 798. no. 85.
— Lowii Roezl 797. no. 30.
— magnifica Roezl 798. no. 67.
— Michoacanensis Roezl 797. no. 62.
— microcarpa Roezl 797. no. 43.
— monstrosa Roezl 796. no. 4
— monte-Allegri Roezl 797. no. 48.
— Mülleriana Roezl 797. no. 42.
— Nesselrodianus Roezl 797. no. 24.
— nitida Roezl 798. no. 70.
— Northumberlandiana 796. no. 12.
— Ocampii Roezl 798. no. 69.
— Ortgiesiana Roezl 797. no. 58.

Pinus Pallasii Parol. (s.) 798. no. 86.
— Papeleuii Roezl 798. no. 79.
— Parolinii Vis. ° 798. no. 86.
— patula Schiede et Deppe 798. no. 84.
— Paxtoni Roezl 797. no. 18.
— Planchonii Roezl 797. no. 33.
— Popocatepetlii Roezl 798 no. 88.
— prasina Roezl 797. no. 56.
— protuberans Roezl 798. no. 63.
— Regeliana Roezl 798. no. 72.
— resinosa Roezl 798. no. 75.
— Richardiana Roezl 797. no. 32.
— Rinzii Roezl 797. no. 59.
— robusta Roezl 797. no. 34.
— Rohanii Roezl 797. no. 57.
— Sabiniana Dougl. 799. †
— San Rafaeliana Roezl 796. no. 13.
— scoparia Roezl 798. no. 73.
— Soulangeana 796. no. 2.
— spinosa Roezl 796. no. 8.
— Standishii Roezl 798. no. 76.
— Tenangaensis Roezl 796. no. 1.
— Theiemanii Roezl 797. no. 27.
— Thibaudiana Roezl 797. no. 19.
— Troubetzkoiana Roezl 796. no. 3.
— Tzompoliana Roezl 797. no. 54.
— valida Roezl 797. no. 23.
— verrucosa Roezl 797. no. 47.
— Verschaffeltii Roezl 798. no. 71.
— Vilmoriana Roezl 797. no. 40.
— Wilsonii Roezl 797. no. 37.
— Zacatlanae Roezl 797. no. 61.
— Zitacuarii Roezl 798. no. 69.
Pionandra Miers ° V. 567.
— allophylla Miers 568. no. 13.
— Cajanumensis Miers 568. no. 10.
— Capsicoides Miers 568. no. 1. †
— coriacea Miers 568. no. 9.
— cornigera Miers 568. no. 12.
— cylindrica Miers 568. no. 8.
— divaricata Miers 568. no. 2.
— elliptica Miers 568. no. 7.
— (Cerotostema) floribunda Miers 568. †
— Fraxinella Miers 568. no. 11.
— Hartwegii Miers 568. no. 5.
— laxiflora Miers 568. no. 3.
— oxyphylla Miers 568. no. 4.
— pinnata Miers ° 568. no. 14.
— velutina Miers 568. no. 6.

Piperaceae L. C. Rich. V. 743.

Piptatherum Palis. VI. 970.
— laeve Meyen (s.) 971. no. 3.
— Lindleyanum Nees (s.) 971. no. 4.
— miliaceum Coss. 970. no. 1.

Piptochaetium Presl. (Desv.) ° VI. 971. (Urachne sectio V.)
— bicolor Desv. 972. no. 4.
— ovatum Desv. 972. no. 3.
— panicoides Desv. 971. no. 1.
— setifolium Presl. (s.) 971. no. 1.
— tuberculatum Desv. ° 971. no. 2.
Piptostemma Turcz. ° V. 270.
— Carpesioides Turcz. ° 270. no. 1.
Piptostylis Dalz. ° IV. 355.
— Indica Dalz. ° 356. no. 1.
Pisonia Plum. V. 722.
— aculeata Wight ic. (s.) 722. no. 3. †
— alba Spanh. (s.) 722. no. 4.
— Georgina Wall. (s.) 722. no. 5.
— grandis A. Cunning. herb. (s.) 722. no. 1.
— Mooriana F. Müll. 722. no. 2.
— Morindaefolia R. Br. 722. no. 4.
— Pacurero Knth. 722. †
— silvestris Teysm. et B. (Hassk.) ° 722. no. 3.
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— Africana Presl (Kl.) ° 914. no. 9.
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— Brasiliensis Klotzsch ° 914. no. 13.
— commutata Schleid.; Knth. (s.) 913. no. 1.
— crispata Bl. ° 913. no. 2.
— Cumingii Klotzsch ° 913. no. 4.
— Gardneri Klotzsch ° 915. no. 14.
— Horkeliana Miq. Symb. (s.) 913. no. 1.
— Leprieurii Bl. (Kl.) ° 914. no. 8.
— linguaeformis Bl. (Kl.) ° 914. no. 12.
— linguaeformis β. Leprieurii Schleid. (s.) 914. no. 8.
— minor Bl. (Klotzsch) ° 913. no. 3.
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Altensteinii Lem. ° 79. †
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aurantiaca Ten. (s.) 79. no. 2.
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var. γ variegata Miq.
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— ovatifolia A. Gr. ° 237. no. 3.
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var. β. breviaristata E. Desv. °
— linearis Trin. 983. n. 2. †
— litoralis Sm. β. breviaristatus Lge. ° 984. no. 1.
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Polystachya bracteosa Lindl. ° 642. n. 20. †
— Caracasana Rchb. f. ° 641. no. 12.
— cerea Lindl. ° 641. no. 15.
— clavata Lindl. ° 642. no. 18.
— Estrellensis Rchb. f. ° 641. no. 13.
— extinctoria Rchb. f. ° 638. no. 4.
— foliosa Rchb. f. ° 640. no. 8.
— galeata Rchb. f. ° 637. no. 1.
— grandiflora Lindl. ° (s.) 637. no. 1.
— Jussieana Rchb. f. ° 641. no. 14.
— luteola Lindl. ° α. angustifolia Hook. ° 639. no. 7.
— luteola Focke ° (s.) 639. no. 1.
— luteola Hook.; Wight ic. (s.) 640. n. 11.
— Masayensis Rchb. f. ° 642. no. 17. var. elatior.
— nana Kl. ° (s.) 641. no. 12.
— nana Rchb. f. ° 638. no. 5.
— Ottoniana Rchb. f. ° 638. no. 3.
— Paulensis Rchb. f. ° 642. no. 16.
— pubescens Rchb. f. ° 643. no. 22.
— purpurea Wght. ic. ° 640. no. 9.
— ramulosa Lindl. ° 643. no. 21.
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— Weigelti Rchb. f. (s.) 640. no. 8.
— Wightii Rchb. f. ° 641. no. 11.
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— prolifera Rchb. f. 454. no. 13.
— puncturlata Rchb. f. ° 451. no. 5.
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— caudata Grah. in Wall. C. (s.) 580. n. 3.

Pongamia cinerea Wall. Cat. (s.) 573. n. 4.
— ? Corollaria Miq. ° 572. no. 6.
— fruticosa Grah. in Wall. C. (s.) 580. no. 2.
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— glabra (non Vent.) Zoll.; Arch. (s.) 571. no. 2.
— glabra Zoll. et Mor. (s.) 584. no. 1.
— grandiflora Moritz 571. no. 2.
— Heyneana (Grah.) W. et Arn. (s.) 572.
— Horsfieldii Miq. ° 572. no. 5.
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— lucida Grah. in Wall. Cat. (s.) 581. n. 1.
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— arboreum Endl. p. p. (s.) 641. n. 1. 2. et 3.
— confusum Bl. ° 642. no. 4.
— griseum Bl. (s.) 641. no. 2. et 4.
— latifolium Miq. ° 641. no. 2.
— parviflorum Teysm. et Binn. ° 641. n. 1.
— Walkeri Bl. 642. no. 3.
— Wightianum Bl. ° 642. no. 7. †
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— Achilleae DC. pr. (s.) 256. †
— alpinum Willd. 247. †
— crassipes Stschegl. ° 247. no. 1.
— delicatulum Fisch. et M. ° 247. no. 2.
— Halleri DC. 247. †
— Indicum Cass. varietates hortor. 247. †
— Myconis DC. (s.) 247. †
— ? serotinum DC. pr. (s.) 256. †

Pyrethrum Tanacetum DC. (s.) 256. †
— uliginosum DC. pr. (s.) 256. †
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— media Sw. 459. †
— minor L. 459. †
— rotundifolia Lin. var. 458. no. 1. †
b. arenaria Koch †
c. orthostyla Rchb. ° †
— secunda L. 459. †
— serotina Ann. du Pas de Calais (s.) 458. n. 1.
— umbellata L. 459. †
— uniflora L. 459. †
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Pyrrocoma Hook. (s.) V. 198.
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— amygdaliformis Vill. ° 669. no. 2.
— communis L. varietates Bunge° 669. n. 1.
— cuneifolia Vis. non Guss. (s.) 669. n. 2.
— eriopleura Rchb. (s.) 669. no. 2.
— longipes Coss. et Dur. ° 669. no. 3.
— salicifolia Asch. non. Pall. (s.) 669. n. 2.
— salviaefolia Pett. non DC. (s.) 669. n. 2.
Pyxidantheae Naud. ° ([illegible] subtribus) IV. 791.
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— barbulata Mx. (Hook.) 530. †
Pyxidanthus Naud. ° IV. 795.
— latifolius Naud. 796. no. 3.
— Lindenianus Naud. ° 795. no. 1.
— Schlimii Naud. ° 795. no. 2.

Q.

Quekettia Lindl. ° VI. 689.
— microscopica Lindl. ° 689. no. 1.
Queria Loefl. IV. 249.
— Hispanica Loefl. IV. 249. no. 1. †
Quilamum luteum Blanco (s.) IV. 692. n. 6.
Quinio Schlechdl. IV. 136.
— cocculoides Schlechtd. IV. 136. no. 1.
Quintinia A. DC. V. 32.
— elliptica Hook. f. ° 32. no. 1. (an spec. distincta ?)

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Rachia Klotzsch ° IV. 902. †
— incana Kl. ° 903. no. 2.
— Meyeri Kl. ° 903. no. 3.
— peltata Kl. ° 903 no. 1.
Raffenaldia Godr. ° IV. 220.
— primuloides Godr. ° IV. 220. no. 1.
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— Patma Bl. (De Vr.) ° † IV. 17. no. 2.
— Rochussenii Teysm. et Bin. ° VI. 17. no. 1.
Rafflesiaceae Sch. et Endl. VI. 17.
Rafflesieae R. Br. VI. 17.
Rafinesquia Nutt. V. 320.
— Neo-Mexicana A. Gray ° 320. no. 1.
Randalia Americana Petiv. Gaz. (s.) 929. no. 11. †
— decangularis Beauv. et D. (s.) V. 929. no. 11. †
— densa Beauv. et D. (s.) 927. no. 4.
— depressa Beauv. et D. (s.) 927. no. 3.
— fistulosa Beauv. et D. (s.) 927. no. 2.
— scariosa Beauv. (s.) V. 927. no. 1.
Randia Houst. V. 134.
— ? canthioides Champ. ° 135. no. 3.
Randia ? leucocarpa Champ. ° 134. no. 2.
— speciosa Hook. ° 134. no. 1. †
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Ranunculus Haller IV. 16
— aquatilis L. pr. p. var. longifolius Roem. IV. 17. no. 6.
var. brevifolius Roem. IV. 17. no. 6.
— attenuatus Royle (s.) IV. 18. no. [illegible]
— Baudotii Godr. IV. 17. no. 7.
— Blumei Steud. (s.) IV. 18. no. 11.
— brevirostris Edgew. (s.) IV. 20. no. [illegible]
— caespitosus Wall. IV. 18. no. 13.
— carnosus Wall. (s.) IV. 20. no. 21.
— Carpaticus Herb. IV. 21. no. 27.
— Choorensis Royle (s.) IV. 18. no. [illegible]
— coenosus Guss. IV. 16. no. 3.
— cortusaefolius DC. 17. †
— Cymbalariae Pursh IV. 18. no. 16.
var. major et minor Hook. °
— diffusus DC. (Hook. et Th. °) IV. 20. n. [illegible]

nunculus digitatus Hook. ° IV. 17. n. 9.
distans Royle (s.) IV. 20. no. 23.
divaricatus Schr. IV. 16. no. 2.
fibrosus Wall. ° IV. 20. no. 24.
flaccidus H. f. et Th. ° IV. 21. no. 29.
flammula Dcd. (s.) IV. 18. no. 14.
fluitans Lam. IV. 16. no. 5.
geranioides Bl. (s.) IV. 16. no. 11. et IV. 20. no. 22.
glacialis L. IV. 21. †
Gouani Willd. et Baumg. (s.) IV. 21. no. 27.
graminalis Schott ° IV. 21. no. 26.
halophilus Schlechtdl. (s.) IV. 18. n. 16.
hastatus Walker (s.) IV. no. 19.
hederaceus L. IV. 16. no. 4.
hirtellus Royle (Hook. et Th. °) IV. 18. no. 20.
hydrocharoides A. Gray ° IV. 17. n. 10.
hydrocotyloides Wall. (s.) IV. 20. n. 22.
hyperboreus Rottb. IV. 18. no. 18.
indicus Roxb. (s.) IV. 20. no. 21.
laetus Wall. (s.) IV. 18. no. 20. et 20. no. 23.
Lingua L. IV. 18. no. 12.
lobatus Jacquem. IV. 18. no. 15.
longicaulis C. A. Mey (s.) IV. 18. n. 14.
longirostris Godr. IV. 16. no. 1.
membranaceus Royle (s.) IV. 18. n. 14.
mollis Wall. (s.) IV. 20. no. 22.
montanus var. dentatus Baumg. (s.) IV. 21. no. 27.
Napaulensis DC. (s.) IV. 20. no. 22.
natans C. A. Mey. (s.) IV. 18. no. 17.
nephelogenes Edgew. (s.) IV. 18. no. 14.
nervosus Royle (s.) IV. 18. no. 20.
obtectus Wall. (s.) IV. 20. no. 22.
pedatifidus Ledeb. (s.) IV. 18. no. 19.
pimpinelloides (Callianthemum) Don in Royle (s.) IV. 16. no. 1.
pinnatus Wight (non Poir.) (s.) IV. 21. no. 30.
plantaginifolius Murr. (s.) IV. 18. n. 16.
polypetalus Royle (Oxygraphis) (s.) IV. 31. no. 1.
prolifer de Vr. IV. 18. no. 11.
pulchellus C. A. Mey. IV. 18. no. 14.
pygmaeus Wahlenb. (s.) IV. 18. no. 18.
radicans C. A. Mey. IV. 18. no. 17.
rectirostris Coss. et Dur. IV. 17. n. 10.
sagittifolius Hook. ° IV. 16. no. 13.
salsuginosus Wall. (s.) IV. 18. no. 14.
salsuginosus Don (s.) IV. 18. no. 15.
salsuginosus Pall. (s.) IV. 18. no. 16.
sceleratus L. IV. 20. no. 22.
Ranunculus spicatus DC. IV. 17. †
— Tappeineri Bamberger IV. 21. no. 28.
— tridentatus H. B. K. (s.) IV. 18. no. 16.
— trilobatus Don (s.) IV. 20. no. 22.
— tripartitus DC. IV. 17. no. 8.
— vestitus Wall. IV. 22. no. 31.
— Wallichianus Wght. et Arn. ° IV. 21. no. 30. †
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— grandiflora Hook. f. ° 278. no. 4. †
— subsericea Hook. f. ° 278. no. 3.
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— taedigera Mart. 833. no. 571. †
— vinifera Pal. B. 833. no. 572.
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— bilinguis Rchb. f. (s.) 877. no. 6.
— coccinea Lour. ° 875. no. 1. †
— elongata Lindl. ° 876. no. 3.
— flos aeris Rchb. ° 878. no. 7.
— labrosa Rchb. f. ° 877. no. 6.
— Lowei Rchb. f. ° 878. no. 8.
— matutina Lindl. bot. Reg. (s.) 876. n. 3.
— matutina Lindl. Orch. ° 876. no. 5.
— micrantha Bl., Rchb. (s.) 876. no. 3.
— moluccana Bl. ° 876. no. 4.

— Rohaniana Rchb. f. ° 879. no. 9.
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— Aspasicensium Rchb. f. ° 205. no. 8.
— erythroxantha Rchb. f. ° 205. no. 7.
— hypolepta Rchb. f. ° 204. no. 3.
— Landsbergii Rchb. f. et Wagn. ° 205. no. 6.
— ophiocephala Rchb. f. ° 203. no. 1.
— rhynchantha Rchb. et Warsc. ° 205. no. 9.
— Ujarensis Rchb. f. ° 204. no. 2.
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— pauciflorum Korth. (s.) 337. no. 4.
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— pleiosperma A. Gr. ° 82. no. 2. †
— Sandvicensis A. Gr. ° 82. no. 1. †
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— fluvialis Edgeworth ° 542. no. 2.
— viminea Wall. 541. no. 1. †
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— incanus Roxb. (s.) 436. no. 1.
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— ? Cochinchinensis Mart. 818. no. 252.
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— Californicum Hook. f. ° 452. no. 35. †
— calophyllum Nutt. ° 450. no. 24.
— camelliaeflorum Hook. f. 450. no. 26.
— Championi Hook. f. ° 447. no. 8.
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— cinnabarinum Hook. bot. mag. 447. n. 10. †
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var. β. Hook. f. °
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— Duc de Brabant (hybr.) 453. †
— Edgeworthii Hook. 452. †
— Edgeworthii? var. Nutt. ° 449. no. 17.
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— ericoides Low. ° 446. no. 3.
— étendard de Flandre (hybr.) 453. †
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— fulgens Hook. 452. †
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— hirsutum L. 452. †
— Hookeri Nutt. ° 449. no. 20.
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β. platyphyllum Nutt. °
δ. undulatum Nutt. °
— intermedium Tausch 452. †
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- lucidum Nutt. ° 451. no. 27.
- Maddeni Hook. 452. †
- myrtifolium Schott et Kotschy ° 446. no. 1.
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- obovatum Hook. Rhod. Sikk. (s.) 447. no. 9.
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- planifolium Nutt. ° 451. no. 30.
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— adenantha Miq. ° 567. no. 1.
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— filipes Benth. ° 567. no. 3.
— precatoria DC. 568. no. 7. †
— pulverulenta J. E. Stocks 567. no. 4.
Rhynchostylis Gurwalica Rchb. f. 888. n. 3.
— guttata Rchb. f. (s.) 887. no. 1. var. a.
— praemorsa Bl. (s.) 887. no. 1. var. b.
— retusa Rchb. f. ° 887. no. 1.
a. guttata.
b. praemorsa.
c. macrostachya.
— retusa Bl. (s.) 887. no. 1. var. c.
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— tiliaefolia DC. pr. (s.) 531. no. 1.
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— sennoides Roxb. (s.) 491. no. 1.
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— Batemani P. et Endl. ° 694. no. 9.
— candida Batem. ° 695. no. 4.
— carnea Lindl. ° 691. no. 2.
— cochlearis Lindl. (s.) 741. no. 82. d.
— crispa Lindl. (s.) 853. no. 91.
— decora Rchb. f. ° 692. no. 6.
— ensifolia Rz. Pav. 695. no. 16.
— fragrans Rchb. f. ° 694. no. 10.
— Granadensis Rchb. f. ° 695. no. 17.
— lanceolata Rchb. f. 695. no. 15.
— lanceolata bot. Cab. (s.) 691. no. 1.
— laxiflora Lindl. (s.) 853. no. 90.
— maculata Rchb. f. ° 692. no. 4.
— maculata Lindl. (s.) 740. no. 82. c.
— obtusifolia Rchb. f. ° 693. no 8.
— pardina Rch. f. ° 692. no. 5.
— pubescens Rchb. f. ° 694. no. 11.
— recurva Lindl. (s.) 853. no. 88.
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— rigida Rchb. f. ° 692. no. 7.
— secunda H. B. K. 691. no. 1.
— Stangeana Rchb. f. 691. no. 3.
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var. α. β. et δ. Hook. et Th. ° IV. 174. no. 1.
Roemeria orientalis Boiss. Ann. sc. n. (s.) IV. 174. no. 1.
— pinnatifida Boiv. (s.) IV. 174. no. 1.
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Romulea Maratti VI. 49.
— crocea Boiss. et Heldr. ° 49. no. 2.
— Hartungii Parl. ° 49. no. 1.
— Linaresii Parl. ° 50. no. 1.
— multiflora Req. ined. (s.) 50. no. 1.
— rosea var. Celsii Planch. 49. no. 1. †
Rondeletia V. 117.
— (Rogiera) cordata Benth. 118. no. 1.
— (Rogiera) latifolia Oerst. ° 117. no. 2.
— (Rogiera) Nicaraguensis Oerst. 118. no. 4.
— (Rogiera) rugosa Benth. ° 118. no. 3.
— versicolor Hook. ° 117. no. 1. †
Rosa Tournef IV. 654.
— canina Boiss. voy. (non L.) (s.) 654. no. 1. γ.
— fallax Gren. in litt. (s.) 655. no. 3. ε.
— Fortuniana Paxt. ° 656. no. 6. †
— graveolens Gren. et Godr. ° 655. no. 3.
α. genuina.
β. micrantha.
γ. Corsica.
— Hispanica Boiss. et R. ° 654. no. 1.
β. Escurialensis Reut. °
γ. Nevadensis Boiss. et R. °
— hybrida (Dr. Ruschpler) Reg. 656. †
— Lehmanniana Bge. ° 656. no. 5.
— Maracandica Bunge ° 655. no. 4.
— micrantha DC. fl. fr. (s.) 655. no. 3. β.
— Phygia Boiss. (Phrygia?) ° 655. no. 2.
— Seraphini Viv. Cors. (s.) 655. no. 3. γ.
Rosaceae Juss. IV. 654.
Roscoea Smith VI. 19.
— alpina Royle VI. 19. †
— lutea Royle VI. 19. †
— purpurea Sm. (Hook.) ° VI. 19. no. 1. †
Roscyna Spach IV. 360.
— Japonica Bl. ° 360. no. 1.
Rosea Klotsch nec Mart. ° V. 132.
— crassifolia Kl. ° 132. no. 2.
— Jasminiflora Kl. ° 132. no. 1.
Rossmannia Klotzsch ° 918. †

Rossmannia repens Kl. ° 918. no. 1.
Rotala Linn. IV. 685.
— Roxburghiana Wight ic. (s.) IV. 687. no. 5.
— verticillaris L. 685. no. 1. †
Rottboellia R. Br. VI. 1054.
— muricata Retz. 1054. no. 1.
Rottboelliaceae Knth. VI. 1054.
Roupellia Wall. et Hook. V. 490.
— grata Wall. et Hook. 490. no. 1. †
Roussaeaceae DC. V. 403.
Roxburghia Jones VI. 146.
— gloriosoides Driand. 146. no. 1. †
Roxburghiaceae Wall. VI. 146.
Rubiaceae Juss. V. 97.
Rubus L. IV. 657.
— biflorus Buch. 663. †
— caesius s. hispidus Weibe (s.) 662. no. 24. †
— Celebicus Bl. Bidr. (s.) 660. no. 18.
— chrysophyllus Reinw. (Miq.) ° var. β. minor Miq. ° 660. no. 19.
— cornifolius Liebm. 657. no. 6.
— corylifolius s. glandulosus Wallr. (s.) 662. no. 21.
— Costaricanus Liebm. ° 657. no. 7.
— dumetorum Schlechtd. (non Weihe) (s.) 657. no. 4.
— dumetorum β. glandulosus Godr. (s.) 662. no. 24.
— elongatus Smith 661. no. 20.
var. β. subsinuosa Miq.
var. γ. extensiflora Miq.
— eriocarpus Liebm. ° 658. no. 10.
— fagifolius Schl. et Cham. (Liebm.) ° 657. no. 2.
— fraxinifolius Bl. Bidr. (s.) 660. no. 18. α.
— fraxinifolius Poir. 660. no. 18.
var. minor Miq. °
— glaberrimus Champ. 660. no. 15.
— Hasskarlii Miq. ° 661. no. 21.
Rubus Hawaiensis A. Gray ° 659. no. 13. †
var. β. A. Gr. °
— Horsfieldii Miq. ° 660. no. 16. †
— humifusus Schlchtd. (s.) 658. no. 11.
— humistratus Steud. 658. no. 11.
— Javanicus Bl. (s.) 660. no. 17.
— Lobbianus Hook. ic. (s.) 661. no. 20. γ.
— Macraei A. Gray ° 659. no. 14. †
— micans Godr. et Gren. 662. no. 23.
— miser Liebm. ° 657. no. 5.
— Moluccanus var. ochraceus Bl. (s.) 660. no. 19. β.
— Neo-Mexicanus A. Gr. ° 658. no. 12.
— pilato-stachys Godr. et Gr. ° 663. n. 25.
— pruinosus Zoll. Arch. (s.) 660. no. 16.
— rosaefolius Smith 660. no. 17.
— rotundifolius Reinw. ° 661. no. 22.
— scandens Liebm. ° 657. no. 3.
— Schiedeanus Steud. (Liebm.) ° 657. n. 4.
— serpens Godr. et Gr. 662. no. 24.
— tiliaceus Liebm. ° 657. no. 9.
— trichomallus Schlchtd. 657. no. 8.
— trilobus Moç et Sesse (Liebm.) ° 657. no. 1.
— vulgaris β. glandulosus Godr. (non Weihe) (s.) 663. no. 25.
Rutaceae Bartl. IV. 414.
Ruellia L. V. 649.
— glomerata Wall. Cat. (s.) 650. no. 1. α.
— subacaulis Koch et Bouché 649. no. 2.
— tetrasperma Champ. ° 649. no. 1.
— undulata Vis. ° 650. no. 3.
Rühssia Karst V. 499.
— purpurea Schlchtd. ° 499. no. 1.
Rulingia R. Br. IV. 322.
— pannosa R. Br. 322. no. 1. †
Russelia Jacq. V. 627.
— sarmentosa Jacq. var. semperflorens Reg. 627. †
Rykia de Vr. ° V. 858.
— furcata de Vr. 858. no. 1.

S.

Sabal Adans. V. 817.
— Adansoni Guerns. 817. no. 230. †
— ? glaucescens Lodd. 817. no. 237.
— graminifolia Lodd. 817. no. 235.
— Mexicana Mart. 817. no. 231. †
— minima Nutt. 817. no. 234.
— Palmetto Lodd. 817. no. 232.
— serrulata R. et Sch. 817. no. 233.
— umbraculifera Mart. 817. no. 229. †
Sabal Woodfordii Lodd. 817. no. 236.
Sabbatia Adans. V. 510.
— campestris Nutt. 510. †
Sabia Colebr. IV. 138.
— campanulata Wall. ° IV. 138. no. 1.
— celastrinea Wall. Cat. (s.) IV. 139. n. 6.
— lanceolata Colebr. ° IV. 138. no. 4.
— leptandra H. et Th. ° IV. 138. no. 3.
— limoniacea Wall. Cat. ° IV. 139. no. 6.

Sabia paniculata Edgew. (H. et Th.) ° IV. 199. no. 7.
— parviflora Wall. ° IV. 139. no. 5.
— purpurea H. et Th. ° IV. 138. no. 2.
Sabiaceae H. et Th. ° IV. 137.
Sabulina (Alsine Wahlenb.) (s.) IV. 249.
— mucronata Rchb. (s.) IV. 250. n. 1. δ. †
— tenuifolia Rchb. (s.) IV. 250. n. 1. α. †
Saccocalyx Coss. et Dur. ° V. 670.
Satureioides Coss. et Dur. ° 670. no. 1.
Saccolabium Bl. VI. 883.
— acutifolium Lindl. ° 883. no. 2.
— ampullaceum Lindl. sert. (s.) 884. n. 4.
— bifidum Lindl. ° 886. no. 11.
— Blumei Lindl. (s.) 887. no. 1. var. b.
— calceolare Lindl. ° 883. no. 1. †
— compressum Lindl. 883. no. 3.
— densiflorum Lindl. ° 885. no. 9.
— dentatum Paxt. (s.) 883. no. 2. †
— fasciculatum Lindl. (s.) 881.
— filiforme Rchb. f. ° 887. no. 16.
— flexuosum Rchb. ° 886. no. 14.
— gemmatum Lindl. ° 885. no. 10.
— giganteum L. O. (s.) 869. no. 18.
— Gorwalicum Lindl. (s.) 883. no. 3.
— guttatum Lind. sert. (s.) 887. n. 1. var. a.
— ochraceum Lindl. ° 932.
— pumilio Rchb. 886. no. 13.
— quinquefidum Lindl. ° 886. no. 12.
— racemiforum L. O. (s.) 891. no. 3.
— Rheedii R. Wght. ic. (s.) 888. n. 1. var. b.
— ringens Lindl. ° 884. no. 5. †
— rubrum Lindl. ° 884. no. 4. †
— rubrum Lindl. in Wight ic. (s.) 884. no. 5. †
— speciosum Wight Ic. (s.) 896. n. 2. †
— violaceum Rchb. f. (s.) 888. no. 2.
— viridiflorum Lindl. ° 885. no. 8.
— Walkeriana Rchb. f. ° 887. no. 15.
— Wightianum Lindl. ° 884. no. 6.
Saccopetaleae Hook. et Th. ° IV. 74.
Saccopetalum Benn. IV. 76.
— longiflorum H. et Th. ° IV. 76. no. 1.
— tomentosum H. et Th. ° IV. 76. no. 2.
Sacoglottis Mart. (non Saccoglotis ut in Endl.) char. emendatus Benth. ° IV. 365.
— Amazonica Mart. 365. no. 1.
— Guianensis Benth. ° 365 no. 2.
Sageraea Dalz. ° IV. 50.
— elliptica H. et Th. ° IV. 50. no. 2.
— laurina Dalz. ° IV. 50. no. 1.
— Thwaitesii H. et Th. IV. 50. no. 3.
Sagina L. IV. 246.
— apetala L. 247. no. 2.
Sagina Corsica Jord. (Willk.) ° 248. n. 4. †
— dichotoma Heuff. ° 248. no. 7.
— muscosa Jord. (Willk.) ° 247. no. 1. †
— Nevadensis Boiss. et R. (Willk.) ° 247. no. 4. †
— patula Jord. 247. no. 3.
— Reuteri Boiss. (Willk.) ° 247. no. 1. †
— setigera Bisch. ° 248. no. 8.
Saginarum conspectus Willk. ° 246.
Sagraea DC. (Naud.) ° IV. 774.
— acutiflora Naud. ° 775. no. 12.
— Berterii DC. (s.) 752. no. 5.
— columneaefolia DC. (s.) 753. no. 10.
— fascicularis DC. (s.) 754. no. 15.
— glomerata Naud. ° 774. no. 7.
— Guadelupensis DC. 774. no. 3.
— haeretica Naud. ° 775. no. 14.
— heteronervis Naud. ° 775. no. 10.
— hirsuta DC. 775. no. 15.
— lanata Naud. ° 774. no. 9.
— Lima Naud. 775. no. 13.
— Lindeniana Naud. ° 774. no. 6.
— microphylla DC. 774. no. 4.
— neurocarpa Naud. 774. no. 2.
— plumosa Naud. 774. no. 1.
— rariflora DC. (s.) 754. no. 14.
— scabrosa Naud. 774. no. 8.
— scalpta Naud. 774. no. 5.
— sessiliflora DC. (s.) 753. no. 10.
— sparsiflora Naud. 775. no. 11.
— umbrosa DC. (s.) 752. no. 3.
Sagraeae species incertissimae (Naud.) 775.
Sagus Mart. (Metroxyli sect.) ° V. 881.
Salacia Linn. IV. 369.
— dulcis Benth. ° 369. no. 1.
— pruinosa Seem. ° 369. no. 2.
Salicineae L. C. Rich. V. 744.
Salicornia Moq. (Bge) ° V. 738.
Salisburia Smith V. 801.
— Adianthifolia var. macrophylla laciniata 801. †
Salisia gloxiniiflora Reg. Fl. (s.) V. 42. no. 1. †
Salix Tournef. V. 744.
— acutifolia Willd. 746. no. 13.
— acutifolia Willd. (Turcz. °) 758. n. 64. †
— adenophylla Hook. ° 751. no. 34.
— affinis Gren. et Godr. 766. no. 105.
— alba L. 745. no. 7.
var. vitellina Sm.
var. caerulea Sm.
— alpestris Ands. ° 754. no. 47.
α. Pyrenaica Gouan.
β. Norvegica Ands. °
γ. Americana Ands. °

Salix ambigua Pursh (s.) 744. no. 1.
— (lanata) Americana Ands. ° 747. n. 20.
a. Barrattiana Hook. ° †
b. Richardsoni Hook. ° †
— amygdaloides Ands. ° 744. no. 3.
— angustifolia β. leiocarpa Ledeb. (s.) 758. no. 66.
— apiculata Ands. ° 761. no. 76.
— arbuscula L. (Ands.) ° 755. no. 49.
var. Labradorica Ands. °
— Arctica R. Br. ° 753. no. 45.
var. subphylicifolia Ands. °
var. subreticulata Ands. °
var. subpolaris Ands. °
— Barclayi Ands. ° 752. no. 36.
— bicolor Ehrh. (s.) 749. no. 27. 2a.
— Bigelowii Torr. et Gr. ° 747. no. 16.
— (aurita?) brachystachys Benth. ° 749. no. 26.
— brevijulis Turcz. ° 760. no. 71.
— caesia Rchb. 760. no. 72. a. †
— caesia Vill. 760. no. 72.
α. glabra Turcz. °
β. pubescens Turcz. °
— calophylla Wall. Cat. 765. (sp. dub.)
— calostachya Ands. ° 764. no. 90.
— candida Willd. 748. no. 23.
— capreoides Ands. ° 748. no. 24.
— Caroliniana Mchx. (s.) 744. no. 1.
— chlorostachya Turcz. ° 758. no. 68.
— cinerea L.? (Ands. °) 748. no. 25.
— coerulescens Turcz. (s.) 758. no. 64.
— cordata Mühl. (Ands. °) 751. no. 33.
— cordifolia Hook. (s.) 754. no. 47. γ.
— Corylifolia Turcz. pl. exs. 759. n. 70.
— Coulteri Ands. ° 747. no. 18.
— Coulteri Tuckerm. 756. no. 54.
forma major Ands. °
forma minor Ands. °
— curtiflora Ands. ° 754. no. 48. no. 2.
— cuspidata Don (s.) 761. no. 76.
— Daphnoides v. Indica Ands. ° 761. n. 79.
— dealbata Ands. 761. no. 77.
— densa Wall. Cat. (sp. dubia) 765.
— denticulata Ands. ° 762. no. 84.
— depressa L. fl. Suec. (s.) 749. n. 27. 1a.
— depressa cinerascens Trautv. (s.) 749. no. 27. 1. b.
— depressa livida Fr.; Koch (s.) 749. no. 27. 2a.
— depressa α. cinerascens Fr. (s.) 749. no. 27. a.
— depressa velutina Koch (s.) 749. n. 27. 1. a
— depressa γ. bicolor Fr. mant. (s.) 749. no. 27. 2a.
Salix desertorum Rich.; Hook. (s.) 753. no. 44. b.
— (phylicifolia) discolor Mühl. (Ands.) ° 750. no. 30.
— disperma Don (Ands.) ° 765. no. 98.
— Drummondii Barratt 750. no. 29.
— elegans var. Govaniana Wall. Cat. (s.) 763. no. 84.
— eriocephala Mchx. 746. no. 15.
— eriostachya Wall. (Ands.) ° 764. no. 93.
— falcata Prsch. 744. no. 1.
— Fendleriana Ands. ° 745. no. 5.
— flabellaris Ands. ° 765. no. 96.
— fragilis L. 745. no. 8.
var. decipiens Hoffm.
var. Russeliana Sm. °
— fumosa Turcz. ° 759. no. 69.
— Geyeriana Ands. 750. no. 28.
— glacialis Ands. ° 755. no. 52.
— glauca L. ° 753. no. 44.
forma a. villosa Ands. °
forma b. desertorum Ands. ¶
— glaucophylla Ands. ° 761. no. 78.
— gongylocarpa Schuttl. (s.) 744. n. 2. var.
— gracilis Ands. ° 752. no. 43.
rosmarinoides Ands. °
— grisea Marsh. ° 752. no. 38.
— grisea Wall., Steud. (s.) 762. no. 81.
— hastata Linn. (Ands.) ° 762. no. 82.
1. rotundifolia Ands. °
2. oblongifolia Ands. °
— herbacea L. 757. no. 57.
— Himalensis Klotzsch (s.) 762. no. 84.
— Hindsiana Benth. ° 746. no. 10.
— Hookeriana Barratt ° 747. no. 19. †
— Houstoniana Pursh (s.) 744. no. 1.
— Humboldtiana Knth. 757. no. 60. †
— Humboldtiana Mart. Reise (s.) 757. no. 61. †
— humilis Marsh. ° 752. no. 40.
— Japonica Thnbrg. (Ands.) ° 765. no. 99.
— ichnostachya Lindl. (Ands.) ° 763. n. 89.
— irrorata Ands. ° 746. no. 14.
— Julacea Ands. ° 762. no. 80.
— KamaunensisLindl.,Wall.Cat.(s.)762.n.84.
— Karelini Turcz. ° 760. no. 73.
— Kirilowiana Stschegl. ° 759. no. 67. a.
— Kochiana Trautv. 758. no. 65.
— Lapponum Hook.? ° 748. no. 22.
— lasiolepis Benth. ° 747. no. 17.
— lenta Fries (Ands. °) 765. no. 100.
— ligustrina Mchx. (s.) 744. no. 1.
— Lindleyana Wall. (Ands.) ° 765. n. 97.
α. latifolia Ands. °
β. microphylla Ands. °

Salix linearis Turcz. pl. exs. (s.) 758. n. 67. β.
— livida β. cinerascens Wbg. (s.) 749. no. 27. a.
— longifolia Mühl. ° 745. no. 9.
var. angustissima Ands. °
— longipes Schuttlew. ° 744. no. 2.
var. pubescens Schuttlew. °
— Loniceraefolia Turcz. pl. exs. (s.) 758. no. 65.
— lucida Mühl. 744. no. 4.
var. latifolia °
var. ovatifolia °
var. densiflora °
var. angustifolia °
var. lasiandra Benth. °
var. pilosa °
— macrocarpa Nutt. 751. no. 32.
— (phylicaefolia?) macrocarpa Ands. ° 762. no. 83.
— macrolepis Turcz. ° 757. no. 62.
— macropoda Stschegl. ° 759. no. 68.
— Martiana Seybold ° 757. no. 61. †
— microphylla Schlchtdl. et Cham. (s.) 746. no. 10.
— microstachya Turcz. ° 758. no. 66.
— minutiflora Turcz. pl. exs. (s.) 760. no. 72. α.
— Myricaefolia Ands. ° 763. no. 85.
— Myrsinites (L.) Hook. 754. no. 48.
— Myrtillifolia Ands. ° 756. no. 55.
— Myrtilloides L. (Ands.) ° 751. no. 35.
— Myrtilloides Willd. non L. (s.) 760. no. 72. α.
— myrtilloides Cham. (s.) 755. no. 51.
— nigra Marsh. V. 744. no. 1.
— nitens Turcz. pl. exs. (s.) 758. n. 67. γ. δ.
— nobilis Fr. (Ands.) ° 764. no. 92.
— obovata Wall. Cat. (s.) 765. no. 98.
— ovalifolia Trautv. 755. no. 51.
— Padifolia Ands. ° 766. no. 101.
— petiolaris Sm. ° 752. no. 39.
— phylicifolia β. majalis Ledeb. (s.) 759. no. 69.
— phylicoides Ands. 750. no. 31.
var. latifolia.
var. angustifolia.
— phlebophylla Ands. ° 756. no. 53.
forma major Ands. °
„ media Ands. °
„ minor Ands. °
— Pontederana in Ledeb. excl. syn. (s.) 758. no. 65.
— Populifolia Ands. ° 764. no. 94.
— Pseudo-Myrsenites Ands. ° 754. n. 48. 1.
— psilostigma Ands. ° 764. no. 96.
Salix purpurea L. 746. no. 11.
— Purshiana Spr. (s.) 744. no. 1.
— Pyrenaica Norwegica Fr. (s.) [illegible] no. 47. β.
— Pyrina Wall. (Ands.) ° 763. no. 82.
— Pyrolaefolia Ledeb. (Turcz.) ° [illegible] no. 70. †
— repens L. 752. no. 42.
— reticulata L.; Hook. 756. no. 56.
a. vestita Hook. °
var. grandiflora Ands. °
var. parvifolia Ands. °
b. normalis L. (Ands. °)
c. nana Ands. °
— reticulata L. 760. no. 74.
α. glabra.
β. villosa.
— Rhamnifolia (Pall.) Hook. 755. no. [illegible]
— rostrata Rich. (s.) 749. no. 27. 1b.
— Roylii Klotzsch (s.) 762. no. 81.
— rubra Rich. (s.) 745. no. 9.
— rufescens Turcz. pl. exs. (s.) 758. n. 67. [illegible]
— sabulosa Turcz. pl. exs. (s.) [illegible] n. 73.
— sessilifolia Nutt. ° 746. no. 10.
— Sibirica Ledeb. (s.) 760. no. 72.
— Sieboldiana Bl. (Ands.) ° 766. no. 102.
— Sitchensis Ledeb. ° 752. no. 37.
— speciosa Hook. et Arn. Seem. ° [illegible] no. 21. †
— sphacelatum Sm. (s.) 749. no. 27. 1a.
— splendens Turcz. pl. exs. (s.) 758. n. 67.
— Starkeana Willd. 749. no. 27. 2b.
— Stuartiana Sm. Hook. (s.) 748. no. 22.
— suaveolens Ands. ° 764. no. 91.
— subcordata Ands. ° 754. no. 46.
— taxifolia H. B. K. 746. no. 10.
— tetrasperma Roxb. (s.) 763. no. 86. †
— tristis Ait. microphylla ° 752. no. 41.
— Unalaschkensis Cham.? (s.) 765. no. 32.
— urophylla Lindl. (Ands.) ° 763. n. 88.
— Uva Ursi (Ph.) Seem. ° (s.) 755. no. 51. et 53.
— Uva Ursi (Ph.) A. Gr. (s.) 756. n. 51.
— Uva Ursi (Ph.) Hook. p. p.? 753. n. 32.
— vagans Ands. ° 749. no. 27.
1. cinerascens
a. Linneana Ands. °
var. elata orgyalis Wbrg.
var. depressa Ands.
b. occidentalis Ands. °
2. glabrescens.
a. intermedia Ands. °
var. livida.
var. bicolor.
b. orientalis Ands. °

Salix vestita Pursh; Reichenb. (s.) 760. no. 74. β.
— villosa Don.; Hook. (s.) 758. no. 44. a.
— viminalis L. 746. no. 12.
— viminalis L. (Turcz.) 758. no. 67. †
α. genuina Turcz. °
β. angustifolia Turcz. °
γ. Turcz. °
δ. Turcz. °
ε. Turcz. °
ζ. Turcz. °
— viridis Fr. 745. no. 7.
— viridula Ands. ° 766. no. 103.
— vulpina Ands. ° 766. no. 104.
— Wallichiana Ands. ° 762. no. 81.
— Wimmeriana Gren. et Godr. ° 766. no. 106.
— Wrightii Ands. no. 745. no. 6.
Salomonia Lour. IV. 239.
— Horneri Hassk. ° 289. no. 1.
Salpichroa Miers V. 571.
— diffusum Miers 572. †
— (Eusalpichroa) hirsutum Miers 572. †
— (Perizoma) rhomboidea Miers 572. †
— triste Miers 572. †
Salpiglossideae Miers V, 560.
Salpiglossis R. et Pav. V. 598.
— sinuata R. et P. 598.
var. coccinea Paxt. †
var. flava Moore †
Salpingantha coccinea hort. (s.) V. 658. no. 6.
Salsola Gaertn. V. 737.
— genistoides Poir. 737. †
— lancifolia Boiss. (s.) 747. no. 1.
— oppositifolia Pall. (s.) 737. no. 1. †
— pulla Koch in herb. Berol. (s.) 737. n. 1.
— Sogdiana Bge. ° 737. no. 2.
Salsolaceae Moq. Tand. V. 727.
Salvia L. V. 676.
— Alvajaca Ord. ° 678. no. 11.
— amabilis Knth. et B. (s.) 679. no. 17.
— angulata Benth. 681. no. 24
— asperata Falconer ms. 681. †
— azurea var. compacta hort. (s.) 679. no. 20.
— Benthamiana Boiss. 676. no. 2.
— caesia Scheele (s.) 679. no. 17.
— Camartoni hort. Regel ° 679. no. 14.
— Candelabrum Boiss. 681. †
— Carduacea Benth. 681. †
— capitata Schlchtd. ° 679. no. 19.
— Costaricensis Ord. ° 679. no. 12.
— farinacea Benth. (Braun) ° 679. no. 17.
— fontinalis Edgew. ° 679. no. 16.
— Gesneraeflora hort. 681. †
— Heerii Regel ° 679. no. 15.
— hians Benth. var. plectranthifolia Paxt. 681. †
— Hierosolymitana Boiss. ° 678. no. 9.
— ianthina Otto et Dietr. 681. †
— Judaica Boiss. 678. no. 10.
— Kochiana hort. Vrat. 679. no. 18.
— oppositifolia R. et P. 681. †
— Persepolitana Boiss. ° 677. no. 8.
— Pinardi Boiss. ° 677. no. 6.
— pinnata L. 681. no. 23.
— Pisidica B. et Heldr. ° 677. no. 3.
— Potentillaefolia B. et Heldr. ° 677. n. 4.
— pseudococcinea Jacq. 681. †
— quadrimaculata Schlchtdl. (ad interim) ° 680. no. 20.
— Rascheyana Boiss. ° 677. no. 5.
— Reuteriana DC. exp. (s.) 677. no. 8.
— Roemeriana Scheele 681. no. 22.
— rubifolia Boiss. ° 676 no. 1.
— Schielii Boiss. (s.) 678. no. 10.
— Sittae Vis. 681. †
— Stachyoides Knth. allodapa Hassk. ° 681. no. 21.
— trichostyla Bisch. (s.) 679. no. 17.
— xanthocheila Boiss. 677. no. 7.
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— Valerandi L. 472. †
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— aurantiaca Hook. ° 100. no. 1. † et 152.
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Sanguisorba L. IV. 665.
— annua Nutt. 665. no. 1. †
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— montana (Molkb.) ° 63. no. 1.
α. genuina Molkb. °
β. Javanica M. °
γ. divaricata M. °
— montana Rwdt. (s.) 63. no. 1. α.
— Sandwicensis A. Gr. ° 63. no. 2. †
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— alata Dun. (s.) 569. no. 7.
— allogona Schl. (s.) 569. no. 9.
— auriculata Miers (s.) 569. no. 16. †
— biflora R. et P. (s.) 569. no. 4.
— ciliata Miers (s.) 569. no. 12.
— conspersa Miers (s.) 569. no. 17.
— contorta R. et P. (s.) 569. no. 2.
— dentata R. et P. (s.) 569. no. 10.
— diffusa Miers (s.) 569. no. 14.
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— glandulosa Miers (s) 569. no. 21. †
— Jaltomata Schl. (s.) 569. no. 8.
— laxa Miers (s.) 569. no. 15.
— Miersii A. DC. (s.) 569. no. 22.
— procumbens R. et P. (s.) 569. no. 5.
— propinqua Miers (s.) 569. no. 13.
— umbellata Don (s.) 569. no. 6.
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— viscosa Schr. (s.) 569. no. 11.
— Zuccagniana Don. (s.) 569. no. 3.
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— asperrimus Ands. ° 539. no. 1.
Sarcanthus Lindl. VI. 891.
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— filiformis Lindl. ° 891. no. 1.
— filiformis R. Wight (s.) 887. no. 16.
— oxyphyllus Wall. bot. R. ° 892. no. 5.
— peninsularis Dalz. ° 891. no. 4.
— pugioniformis Rchb. f. ° 892. no. 7.
— racemifer Rchb. f. ° 891. no. 3.
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— teretifolius L. O. 891. no. 2. †
— tricolor Rchb. f. ° (s.) 891. no. 3.
— Walkerianus R. Wight (s.) 887. no. [illegible]
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— amplexicaulis Rchb. f. ° 499. no. 18.
— anceps Rchb. f. 500. no. 21.
— angustifolius Rchb. f. 500. no. 18.
— arachnites Rchb. f. 498. no. 2.
— aurifer Rchb. f. ° 498. no. 5.
— australis Rchb. f. ° 501. no. 33.
— Barkleyanus F. Müll. (s.) 502. no. 35.
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— compressus Rchb. f. 498. no. 7. †
— croceus Lindl. 500. no. 26.
— emarginatus Rchb. f. 500. no. 13.
— falcatus R. Br. pr. 500. no. 23.
— fuscoluteus Lindl. 501. no 27. †
— gracilentus Rchb. f. 499. no. 8.
— hystrix Rchb. f. 500. no. 20.
— lilacinus Griff.; Rchb. f. ° 499. no. 9. †
— minimus Rchb. f. 503. no 17.
— obtusus Rchb. f. 500. no. 24.
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— pallidus Rchb. f. 500. no. 15.
— parviflorus Lindl. ° 501. no. 31.
— pictus Rchb. f. ° 501. no. 32.
— purpurascens Rchb. f. 498. no. 3.
— pusillus Rchb. f. ° 500. no. 14.
— rhopalorrhachis Rchb. f. 500. no 12.
— serraeformis Rchb. f. ° 498. no. 6.
— spurius Rchb. f. 500. no. 16.
— subulatus Rchb. f. 500. no. 19.
— teres Rchb. f. ° 499. no. 11.
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— Cheiri Lindl. (s.) 246. no. 7.
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Sarcopodium grandiflorum Lindl. (s.) 245. no. 4.
— Griffithii Lindl. (s.) 247. no. 13.
— leopardinum Lindl. (s.) 247. no. 12.
— Lobbii Lindl. (s.) 245. no. 5.
var. Henshallii Henfr.
— macranthum Lindl. (s) 245. no. 6.
— megalanthum Lindl. (s.) 246. no. 8.
— pileatum Lindl. (s.) 246. no. 10.
— Reinwardtii Lindl. (s.) 246. no. 9.
— rotundatum Lindl. (s.) 244. no. 3.
— striatum Lindl. (s.) 257. no. 55 c.
— Triadenium Lindl. (s.) 257. no. 55. b.
— uniflorum Lindl. (s.) 247. no. 14.
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— caesia L. 28. †
— Camposii Boiss. et R. ° 26. no. 8.
— Carinthiaca Schott ° 27. no. 15.
— Corsica Gren. et Godr. ° 24. no. 2.
— cultrata Schott ° 27. no. 18.
— dilatata Schott ° 28. no. 20.
— exarata D. Hook. nec Vill. (s.) 24. n. 1.
— flagellaris Willd. 28. †
— Flittneri Heuff. ° 26. no. 9.
— Gibraltarica B. et Reut. ° 25. no. 7.
— glaucescens Reut. 25. no. 4.
— globulifera Boiss. voy. (pr. p.) (s.) 25. no. 6.
— globulifera β. Gibraltarica Ser. (s.) 25. no. 7.
— Granatensis B. et Reut. ° 25. no. 6.
— granulata Boiss. voy. bot. (s.) 25. n. 4.
— granulata Desf. (non L.) (s.) 24. no. 3.
— granulata β. Corsica Duby (s.) 24. n. 2.
— Heuffelii Schott ° 27. no. 17.
— laeta Schott ° 27. no. 19.
— lasiophylla Schott ° 28. no. 22.
— luteo-purpurea Sternb. pr. p. (s.) 26. no. 10.
— luteo-purpurea var. Herb. (s.) 26. n. 10.
— luteo-viridis Schott et K. ° 26. no. 10.
— Magellanica Poir. (Gris.) ° 24. no. 1.
— Molyi Schott ° 26. no. 12.
— mixta var. Lap. fl. Pyr. tab. 21.? (s.) 25. no. 5.
— notata Schott ° 27. no. 13.
— obscura Gren. et Godr. 25. no. 5.
— oppositifolia L. (S. coerulea Pers.) 28. †
— Oranensis Schott ° 28. no. 24.
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— depauperata Br. (s.) 375. no. 32.
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— Lycioides DC. pr. (s.) 372. no. 3.
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— membranacea DC. pr. (s.) 372. no. 2.
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— conferta Endl. P. (s.) 454. no. 14.
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— parviflora Endl. Poepp. (s.) 491. no. 18.
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— Ottonis Kl. ° 688. no. 1.
— saccatus Rchb. f. ° 689. no. 4. †
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— insignis Karst. (Maximiliana ins. Mart.) 855. no. 6.
— macrocarpa Karst. ° 855. no. 4.
— princeps Karst. (Attalea princ. Mart.) 855. no. 5.
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β. caerulescens Seem. †
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— inciso serrata Kl. 898. no. 5.
— luxurians Kl. ° 898. no. 3.
— muricata Kl. ° 898. no. 2.
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— altissima C. A. Mey. ° 736. no. 13.
— australis C. A. Mey. ° 736. no. 17.
— baccifera C. A. Mey. ° 735. no. 12.
— corniculata C. A. Mey. ° 735. no. 10.
— dendroides C. A. Mey. ° 736. no. 20.
— heterophylla Kar. et Kir. ° 735. no. 11.
— leiosperma C. A. Mey. ° 736. no. 14.
— linearis Moq (sub Chenopodina) 736. n. 18.
— maritima C. A. Mey. ° 735. no. 9.
— microphylla C. A. Mey. ° 736. no. 19.
— microsperma C. A. Mey. ° 735. no. 4.
— obtusifolia Bge. ° 735. no. 8. et 736. n. 1.
— physiphora C. A. Mey. ° 736. no. 15.
— pterantha Kar. et Kir. ° 735. no. 2.
— pygmaea Kar. et Kir. ° 735. no. 7.
— salsa C. A. Mey. ° 735. no. 5.
— setigera C. A. Mey. ° 735. no. 3.
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— transoxana Bge. ° 736. no. 18. et 2.
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— marginata var. Hook. bot. Mag. (s.) 420. no. 7. †
— rosea Lind. herb.; b. R. (s.) 420. no. 8. †
— tibicinis Batem. ° (s.) 429. no. 34. var. grandiflora Lindl. b. Reg. (s.) l. c.
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— maculata Miers ° 917. no. 2. †
— nana Bl. ° 917. no. 5. †
— picta Miers ° 917. no. 3. †
— tenella Bl. (Miers) ° 917. no. 1.
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— bifolia L. var. β. dubia Koch (s.) VI. 114. no. 3.

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— dubia K. Koch ° VI. 114. no. 3.
— elongata Parl. ° 114. no. 6.
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— nutans Sm. (s.) 115. no. 1.
— patula Redouté (s.) 115. no. 2.
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— Philistaea Boiss. ° 1027. no. 1.
— pumila Boiss. ° 1027. no. 2.
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— flava Scheidw. ° (s.) 496. no. 1.
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— Fougerouxiae DC. pr. (s.) 213. no. 1.
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— lurida Dun. (s.) 588. no. 1.
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γ. crispa Bge. °
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— Hierochuntina Boiss. ° 623. no. 10.
— Libanotica Boiss. ° 624. no. 12.
— macrobotrys Ledeb. ° 621. no. 1.
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— myrophylla B. et Heldr. ° 625. no. 17.
— oligantha B. et Heldr. ° 623. no. 7.
— pinnata Kar. et Kir. ° 621. no. 2.
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— polybotrys B. et Kotschy ° 622. no. 4.
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— macrantha Fisch. (s.) 686. no. 5.
— orbicularis Bge. ° 686. no. 8.
— peregrina Benth. pr. p. (s.) 686. no. 1.
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— ? communis Bl. 810. no. 100.
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var. β. longifolium Bge. ° 13. n. 4.
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c. Hudsonianum Lge. °
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— Colensoi Hook. f. ° 341. n. 34.
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— croceus DC. (s.) 346. no. 42. δ.
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α. genuinus Rchb.
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δ. croceus Rchb.
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— Eleagnifolius Hook. f. ° 342. no. 40.
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var. arenarius Rchb. °
— exilis Hombr. (s.) 343. no. 50. †
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— Foeniculaceus Ten. 344. no. 4. †
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β. Raouli Hook. °
γ. macrocephalus Hook. °
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— littoralis Hombr. (s.) 343 no. 51. †
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β. rupestris Rchb.
γ. laciniatus Vis. ° †
δ. bipinnatifidus Vis. †
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var. autumnalis vel serotina Schur ° 1008. no. 1.
— elongata And. ° 1009. no. 1.
— Haynaldiana Schur ° 1010. no. 5.
α. praecox pumilo-montana °
β. aestivalis depauperata alpina °
γ. rigidior °
δ. interrupta °
ε. gracilis °
— Heufleriana Schur ° 1009. no. 3.
var. α. polydactyla °
var. β. digitata °
var. γ. elongata °
— rigida Heuff. (Schur) ° 1009. no. 2.
var. α. capitata °
var. β. ovoidea °
var. γ. rigidifolia °
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— Transsilvanica Schur ° 1010. no. 4.
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— (glauca) subtessellata Büse ° 958. n. 2.
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— ? sulcata Raddi (s.) 949. no. 8.
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— angulatus Hook fl. N. Zel. (non L.) (s.) 866. no. 1.
— australis Endl.; A. Gray 866 no. 1.
— cucumerinus A. Gray ° 867. no. 5. †
var. β. A. Gray °
var. γ. A Gr. °
— Fretensis Hook. Lond. journ. (s.) 866. no. 1.
— laevis A. Gray ° 866. no. 2.
— macrophyllus A. Gray ° 866. no. 4. †
— montanus Poepp. et Endl. 867. no. 6.
— pachycarpus Hook. et Arn. (A. Gr. °) no. 3. †
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— delphinifolia Nutt. (s.) 309. no. 1.
— Diellii A. Gray ° 312. no. 13.
— fallax Walp. A. Gr. ° 312. no. 12.
var. α. A. Gray °
var. β. A. Gr. °
— fallax Walp. (s.) 312. no. 12. α
— hastata St. Hil. 311.
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— bombycina Boiss. 691. no. 7.
— Burgsdorffioides Boiss. ° 693. no. 16.
— Byzantina C. Koch 693. no. 17.
— ciliaris Boiss. ° 690 no. 5.
— citrina B. et Heldr. 692. no. 13.
— diversifolia Boiss. 691. no. 8.
— Garana Boiss. ° 689. no. 2.
— graeca B. et Heldr. ° 690. no. 4.
— Heraclea Bory. et Chaub. (s.) 690. n. 4.
— hydrophila Boiss. ° 691. no. 9.
— inflata Benth β. Caucasica Stschegl. ° 695. no. 21.
— macropserma Boiss. 692. no. 14.
— Messeniaca Boiss. 691. no. 10.
— neurocalycina Boiss. 692. no. 15.
— palustris (L. Poll.) ° 693. no. 19.
var. nonnullae 694. no. 19.
— Pisidica B. et Heldr. ° 689. no. 1.
— recta L. var. Ruthenica Weinm. ° 691. no. 20.
Stachys Satureioides var. Burgsdorffioides Benth. (s.) 693. no. 16.
— silvatica (L. Poll.) ° 693. no. 18.
— Spruneri Boiss. 692. no. 11.
— viticina Boiss. ° 690. no. 3.
Stachytarpha Vahl V. 707.
— Gesnerioides Cham. 707. no. 1.
α. cuneata Schauer °
β rotundata Schauer °
— (Stachytarpheta) mutabilis Vahl 707. †
— (Stachytarpheta) sanguinea Schauer 707. †
— (Stachytarpheta) speciosa Pohl 707. †
Stackhousia Smith V. 768.
— aspericocca Schuch. ° 769. no. 4.
— cuneata Cunningh. (s.) 771. no. 1.
— dorypetala Schuch. ° 770. no. 11.
— flava Hook. ° 770. no. 13. †
— Gunniana Schlchtd. ° 769. no. 7.
— Hügelii Sond. (Schuch.) ° 769. no. 5.
— maculata Hook. ° (Schuch.) ° 769. n. 8.
— monogyna Labill. (Schuch.) ° 769. no. 2. †
— Muelleri Schuch. ° 769. no. 6.
— muricata Lindl. 770. no. 12 †
— obtusa Lindl. (Schuchardt °) 768. n. 1. †
— pubescens Rich. (Schuch.) ° 768. n. 3. †
β. leiococca Schuch. °
— spathulata Sieb. (Schuch.) ° 769. no. 9.
— viminea Smith (Schuch.) ° 770. no. 10.
Stackhousiaceae Lindl. V. 768.
Staehelina DC. V. 354.
— dubia L. 354. no. 2. †
— fruticosa L. (Jaub. et Sp.) 354. no. 1 †
Stanhopea Frost. ° VI. 582.
— aurea Lodd. ° (s.) 589. no. 17. var.
— bucephalus L. O. (s.) 588. no. 15.
— calceolata hort. (s.) 584. no. 3.
— calceolus Rchb. f. ° 583. no. 1.
— cirrhata Lindl. ° 581. no. 4.
— connata Kl. ° 584. no. 6.
— Costaricensis Rchb. f ° 589. no. 20.
— Devoniensis 586. no. 10.
— eburnea Lindl. ° 584. no. 3. †
— ecornuta Lam. ° 583. no. 2.
— Fregeana Rchb. f. ° 589. no. 21.
— grandiflora L. O. bot. mag. (s.) 584. no. 3.
— grandiflora Rchb. f. ° var. Jenischiana Rchb. ° 587. no. 15.
— graveolens Lem. (s.) 587. no. 17.
— graveolens Lindl. ° 589. no. 18.
- guttulata Lindl. (s.) 587. no. 14. b.
— Haselowiana Rchb. f. ° 590. no. 22.
— inodora Lodd. Lindl 588. no. 16.

Stanhopea insignis Frost in bot. mag. ° 585. no. 17. †
— Lindleyi Zucc. (s.) 587. no. 14.
b. guttata Rchb. f. l. c.
— maculosa Knw. Westc. (?) 585. no. 7.
— Marshii Rchb. f. ° 586. no. 12.
— Martiana Lindl. bot. reg. ° 586. no. 9.
— oculata L. O. ° 587. no. 14.
— quadricornis Lindl. ° 590. no. 23.
— saccata Batem. ° 586. no. 11. †
— tigrina Batem. ° 587. no. 13. †
— tricornis Lindl. 584. no. 5.
— velata Morr. (s.) 586. no. 9.
— Wardii Lodd. ° 589. no. 17. †
— Warscewicziana Kl. ° 585. no. 8.

Stanhopeastrum Rchb. f. (sect. Stanhopeae) VI. 583.
— ecornutum Rchb. f. ° 583.

Stanleya Nutt. IV. 211.
— integrifolia Torr. IV. 211. no. 1. †

Staphidiastrum Naud. ° IV. 751.
— aphananthum Naud. ° 753. no. 12.
— attenuatum Naud. ° 753 no. 11.
— Berterii Naud. 752. no. 5.
— Bonplandii Naud. ° 754. no. 13.
— capilliflorum Naud. ° 753. no. 8.
— coriaceum Naud. ° 752. no. 7.
— fasciculare Naud. 754. no. 15.
— impetiolare Naud. ° 752. no. 6.
— latifolium Naud. 752. no. 1.
— platyphyllum Naud. ° 703. no. 9.
— polystachyum Naud. ° 752. no. 2.
— ? rariflorum Naud. 754. no. 14
— rubrinerve Naud. ° 752. no. 4.
— rubrum Naud. ° 753. no. 10.
var. β. biacutum Naud. °
var. γ. microphyllum Naud. °
— umbrosum Naud. 752. no. 3.

Staphidium Naud. ° IV. 745.
— affine Naud. ° 748. no. 12.
— anceps Naud. ° 747. no. 10.
— biserratum Naud. ° 749. no. 16.
— brachystephanum Naud. ° 747. no. 5.
— divaricatum Naud. ° 749. no. 16.
— bracteosum Naud. ° 749. no. 20.
— Chinantlanum Naud. ° 750. no. 22.
— chrysanthum Naud. ° 747. no. 7.
— confertiflorum Naud. ° 749. no. 21.
— conglomeratum Naud. 750. no. 27.
— dependens Naud. ° 750. no. 23.
— diversifolium Naud. 750. no. 28.
— elegans Naud. ° 746. no. 2.
— Galeottii Naud. ° 750. no. 24.
— gracile Naud. 748. no. 15.
— Hostmanni Naud ° 747. no. 6.
— involucratum Naud. 750. no. 29.
— Lindenianum Naud. ° 748. no. 14.
— naevulum Naud. ° 751. no. 30.
— novemnervium Naud. ° 748. no. 11.
— octonum Naud. ° 746. no. 1.
— oxyurum Naud. ° 750. no. 26.
— pauciflorum Naud. 746. no. 3.
β. stellatum Naud. °
γ. albo-roseum Naud. °
δ. calcaratum Naud. °
— pliostemum Naud. ° 748. no. 13.
— purpureum Naud. ° 747. no. 4.
— sessiliflorum Naud. ° 747. no. 9
— spicatum Naud. ° 749. no. 19.
— triste Naud. 750. no. 25.
— urceolatum Naud. 749. no. 18
— Wilsoni Naud. ° 747. no. 8.
var. β. crinitum Naud. °

Staphylaea L. IV. 423.
— simplicifolia Gardn. et Champ. 423. no. 1.

Staphylaeaceae Bartl IV. 423.

Statice Willd. V. 715.
— bicolor Bge. 718 †
— Bonduelli Lestiboud. 716. no. 6.
— caesia de Girard? 718. n. 11.
— confusa Godr. et Gren. ° 717. no. 9.
— dichotoma Dub. (s.) 718. no. 10.
— Dubyei Godr et Gr. ° 718 no. 10.
— Globulariaefolia DC; Boiss. (s.) 717. no. 9. †
— graeca Poir. (Jaub. et Sp) ° 716. no. 3. †
— graeca var. microphylla Boiss. (s.) 716. no. 3. et no. 4.
— gummifera Dur. var. corymbulosa Coss. ° 716. no. 7.
— insignis Coss. ° 717. no. 8.
— (Acantholimon) Carelini Stschegl. ° 715. no. 1. †
— obovata Ledeb. ° 716. no. 5.
— Oliveriana Anderz. ° 715. no. 2. †
— prolifera d'Urv. (Jaub. et Sp.) ° 716. no. 4. †
— reticulata Willd. (s.) 718. no. 10.
— Stocksii Boiss. 718. †
— Tournefourtii Jaub. et Sp. ° 715. no. 1. †

Stauntonia (s.) Brunoniana Wall. Cat. IV. 140. no. 1.

Stauracanthus Lnk. ° IV. 466.
— aphyllus Lk. 466. no. 1.

Staurenthus Liebm. ° IV. 428.

Stauranthus perforatus Liebm. ° 429. n. 1.
Stauropsis Rchb. f. 882.
— Philippinensis Rchb. f. ° 882. no. 1.
Stekhovia Vr. ° V. 370. 385.
— scapigera Vr. ° 385. no. 1. †
var. α. Vr. °
var. β. Vr. °
var. γ. Vr. °
— viscida 385. no. 2.
Stegnocarpus Torr. et Gr. ° V. 548.
— canescens Torr. 548. no. 1.
— Nuttallii Torr. (Hook.) 548. no. 2.
Steineria Klotzsch ° IV. 900. †
— ferruginea Kl. ° 901. no. 1.
— pulchella Kl. ° 901. no. 2.
Steiractis arborescens DC. (s.) V. 175. no. 1.
Stelechocarpus Bl. ° IV. 49.
— Burahol Bl. IV. ° 49. no. 1.
Stelis Sw. VI. 198.
— argentata Lindl. 202. no. 20.
— atro-violacea Rchb. f. ° 201. no. 13.
— braccata Rchb. f. et Warscew. ° 200. no. 12. (?)
— caespitifica Rchb. f. 202. no. 22.
— capillipes Rchb. f. ° 200. no. 10.
— Chachapoyensis Rchb. f. ° 198. no. 1.
— Costaricensis Rchb. f. ° 201. no. 14.
— cupuligera Rchb. et Warscew. ° 199. no. 5.
— dialissa Rchb. f. ° 199. no. 4.
— discolor Rchb. f. ° 202. no. 19.
— eublepharis Rchb. f. ° 201. no. 17.
— euspatha Rchb. f. ° 202. no. 21.
— flacca Rchb. f. ° 198. no. 2.
— foliosa Hook. (s.) 640. no. 8.
— grandis Rchb. f. ° 200 no. 9.
— gutturosa Rchb. f. ° 201. no. 15.
— Heylidiana Focke ° (s.) 202. no. 20. var. argentata.
— major Rchb. f. ° 199. no. 8.
— lobata Rchb. f. ° 203. no. 24.
— maxima Lindl., Rchb. f. ° 198. no. 3.
— melanoxantha Rchb. f. ° 199. no. 6.
— nitens Rchb. f. ° 203. no. ,26.
— porpax Rchb. f. 203. no. 23. (?)
— scansor Rchb. f. ° 199. no. 7.
— spathulata Endl. Pöpp. Rchb. f. 203. no. 25.
— stenophylla Rchb. f. ° 202. no. 18.
— trichorrhachis Rchb. f. ° 200. no. 11.
Stellaria Linn. IV. 260.
— dicranoides Fenzl IV. 260. no. 1. †
Stemodia L. V. 628.
Stemodia angulata Oerd. ° 628. no. 2.
— glabra Oerd. ° 628. no. 1.
Stemonoporus Thw. ° IV. 333.
— affinis Thw. ° 333. no. 2.
— Gardneri Thw. ° 333. no. 1.
— lanceolatus Th. ° 334. no. 3.
— oblongifolius Th. ° 334. no. 4.
— rigidus Thw. ° 334. no. 5.
Stemonurus R. W. (s.) IV. 354.
Stenactis N. a. Es. V. 185.
— annua Nees 185. no. 1. †
Stenandrium Nees V. 655.
— barbatum Torr. et Gr. ° 655. no. 1. †
— chameranthemoideum Oerst. ° 655. n. 2.
Stenanthus Oerd. ° V. 411. †
— heterophyllus Oerd. 411.
Stenia Lindl. VI. 542.
— pallida Lindl. ° 542. no. 1. †
Stenocoryne Lindl. ° VI. 552.
— longicornis Lindl. ° 552. no. 1.
Stenogastra Hanst. ° V. 408. †
— hirsuta Hanst. et Kl. 408.
Stenoglossum coriophorum H. Kunth. Rchb.
— subulatum Lindl. (s.) 347. no. 112.
Stenomeris Planch. ° VI. 41.
—.Dioscoreaefolia Naud. VI. 42. no. 1.
Stenopuntia Engelm. ° (Opuntiae subgen.) V. 48.
Stenotropis Hassk. ° IV. 558.
— Berteroi Hassk. ° 558. no. 1.
Stephania Lour. (H. et Th.) ° IV. 129.
— discolor Hassk. (s.) IV. 130. no. 2.
— elegans H. et Th. ° IV. 129. no. 1.
— hernandifolia H. et Th. ° IV. 129. n. 2.
Stephanocarpeae Klotzsch ° IV. 869.
Stephanomeria Nutt. V. 320.
— Thurberi A. Gray ° 320. no. 1.
Stephanostachys Klotzsch (Chamaedoreae subg.) ° V. 836.
Stephanotis Thouars V. 503.
— Chinensis Champ. ° 503. no. 1.
Stephanotrichum (sect. Staphidii Naud.) Naud. ° IV. 746.
Steptorhamphus Bunge ° V. 325.
— Crambifolius Bge. ° 325. no. 1.
Sterculiaceae Endl. IV. 315.
Sterculieae Schott et Endl. IV. 321.
Stevia Cav. V. 153.
— angustifolia H. B. K. (s.) 159. n. 29. σ.
— anisostemma Turcz. ° 160. no. 35.
— Aschenborniana Sch. Bip. ° 154. no. 3.
— breviflora Sch. Bip. ° 160. no. 31.
— canescens H. B. K. (s.) 158. no. 26.
— Caracasana DC. 157. no. 20.

Stevia clinopodia DC. 160. no. 33.
— compacta Benth. (s.) 156. no. 17. α.
— connata Lag. (Sch. Bip.) ° 159. no. 27.
— coronata Sch. Bip. ° 154 no 6.
— crenata Benth. 154. no. 5.
— Ehrenbergiana Schl. (s.) 156. no. 16. α.
— elatior H. B. K. 154. no. 4.
— elongata H. B. K. 155. no. 11.
var. Moritziana Sch. Bip. °
α. pállida Sch. Bip. °
β. purpurascens Sch. Bip. °
— Eupatoria Sch. Bip. ° 158. no. 24.
— fascicularis Less. (s.) 156. no. 17.
— glandulifera Schlchtd. 155. no. 13.
— glutinosa H. B. K. (s.) 159. no. 28. α.
— hirtiflora Sch. Bip. ° 155. no. 10.
— hyssopifolia H. B. K. (s.) 157. no. 22.
— imbricata Gardn. (s.) 160. no. 1.
— lorullensis vulgaris Sch. B. ° (s.) 156. no. 16. β.
— Ivaefolia W. (s.) 158. no. 26.
— lanceolata Schltd. (non Lag.) 156. n. 16.
— laxiflora DC. 157. no. 22.
var. α. et β. Sch. Bip. °
— leucantha Schldl. (s.) 157. no. 18. β.
— linoides Sch. Bip. ° 158. no. 23.
— lucida Lag. 159. no. 28.
— Macella A. Gray ° 160. no. 34.
— melissaefolius Sch. Bip. 160. no. 31. in adnot.
— menthaefolia Sch. Bip. ° 157 no. 21.
— micrantha Lag. 153. no. 2.
— microchaeta Sch. Bip. ° 160. no. 31.
— microphylla H. B. K. (s.) 153. no. 1.
— mollis Schrad. (s.) 156. no. 18. α.
— monardaefolia H. B. K. 155. no. 9.
— multifida Fl. Mex. (s.) 153. no. 1.
— Nepetaefolia H.B.K. (Sch. Bip.) 156. n. 18.
var. α. mollis Sch. Bip. °
var. β. leucantha Sch. Bip. °
— Nepetaefolia H. B. K. (s.) 157. no. 18. α.
— nitida Walp. 160. no. 32.
— origanoides H. B. K. 156. no. 15.
— petiolata Sch. Bip. 160. no. 31.
— punctata Sch. Bip. ° 158. no. 26.
— purpurea Sch. Bip. ° 158. no. 25.
α. purpurea Sch. Bip. °
β. dianthoides Sch. Bip. °
1. capitata,
2. corymbosa.
3. ramosa.
— Pyrolaefolia Schlchtd. ° 159. no. 30.
— Regnellii Sch. Bip. ° 154. no. 7.
— rhombifolia H. B. K. (Sch. Bip.) ° 156. no. 17.
var. α. stephanocoma Sch. °
var. β. uniaristata Sch. °
Stevia salicifolia Cav. (Sch. Bip.) ° 159. no. 29.
α. exaristata Sch. Bip. °
β. aristata Bip. °
— satureiaefolia Sch. Bip. 160. no. 31.
— serrata Cav. (s.) 158. no. 26.
— stricta Hornem. h. Hafn. (s.) 158. n. 26.
— tomentosa H. B. K. (Sch. Bip.) ° 155. no. 19.
— trachelioides DC. V. 154. no. 8.
var. erythrolepis Sch. Bip. °
— trifida Lag. 153. no. 1.
— triflora DC. 155. no. 12.
— uniaristata DB. 156. no. 17. β.
— viminea DC. (s.) 159. no. 27.
— virgata H. B. K. (s.) 158 no. 26.
Stibadotheca Klotzsch ° IV. 935. †
— ferruginea Kl. ° 935. no. 2.
— magnifica Kl. ° 935. no. 1.
— trachyptera Kl. 936. no. 3.
Stigmaphyllon Adr. Juss. IV. 372.
— retusum Griseb. ° 372. no. 1.
Stilbaceae Lindl. V. 714.
Stipa L. VI. 973.
— brevipes E. Desv. ° 973. no. 5.
— chrysophylla E. Desv. ° 973. no. 3. †
var. minor et major l. c.
— Damascena Boiss. ° 974. no. 9.
— intermedia Trin. et Rupr. (s.) 972. n. 4
— laxa E. Desv. ° 974. no. 6.
— manicata E. Desv. ° 974. no. 7.
— ovata Trin. (s.) 972. no. 3.
— panicoides Lam. Poir. (s.) 971. no. 1
— panicoides Nees (s.) 971. no. 2.
— parviflora Desf. 974. no. 8.
— pogonanthera E. Desv. ° 973. no. 2.
— rostrata Ands. ° 973. no. 1.
— setifolia Knth. (s.) 971. no. 1.
— spicata L. (s.) (ex p.) VI. 1068. no. 1.
— tenacissima L. 974. no. 10.
Stipaceae Kunth VI. 970.
Stipagrostis obtusa Nees (s.) 976. no. 4.
Stocksia Benth. ° IV. 375.
— Brahuica Benth. ° 375. no. 1.
Stracheia Benth. ° IV. 545.
— Tibetica Benth. ° 545. no. 1.
Strangweja hyacinthoides Bert. (s.) VI. [illegible] no. 1.
Stratiotes nymphaeoides Willd. (s.) VI. [illegible] no. 1.
Stravadium Miq. ° (Barringtoniae sect.) [illegible] 850.

Stravadium (Juss. gen.) (s.) 850.
— costatum Bl. (s.) 851. no. 8.
— excelsum DC. (s.) 852. no. 14.
— insigne Bl. (s.) 850. no. 5.
— reticulatum Bl. (s.) 851. no. 11.
— rubrum DC. p. p. (s.) 850. no. 4.
— sarcostachys Bl. (s.) 851. no. 12.
— spicatum Bl. (s.) 851. no 9.
Streptodesma A. Gray ° IV. 531.
— canescens A. Gray ° 531. no. 1. †
Streptanthus Nutt IV. 192.
— carinatus Wright ° IV. 192. no. 2.
— crassicaulis Torr. ° IV. 192. no. 3.
— platycarpus A. Gray ° IV. 192. no. 1.
Streptolirion Edgew. VI. 163.
— volubile Edgew. 163. †
Streptosolen Miers ° V 595.
— Benthami Miers ° 595 no. 1.
Streptostigma Thw. °. IV 375.
— viridiflorum Thw. ° 375. no. 1.
Strobilorhachis Link V. 656.
— glabra Lk. Klotzsch Otto (s.) 656. †
— prismatica Nees (s.) 656. †
Strobiglossa Oerd. ° (Rhytiglossae subg.) V. 661. †
Stromanthe sanguinea Sond. (s.) VI. 31. no. 9. †
— pectalis Lem. (s.) ? 31. no. 9. †
Strombocarpa A. Gr. IV. 614.
— cinerascens A. Gr. ° 614. no. 1.
Strongyle Lindl. (Dendrobii sect.) ° VI. 280.
Strongylocalyx leptostemon Bl. (s.) IV. 840. no. 5.
Strongylodon Vogel (A. Gray) ° IV. 559.
— macrobotrys A. Gr. ° 559. no. 2. †
— ruber Vogel ° 559. no. 1. †
Strongylosperma australis DC. pr. (s.) V. 249. no. 1.
Strophanthus Stanleyanus hort. (s.) V. 490. no. 1.
Strychnos Linn. V. 508.
— paniculata Champ. 508. no. 1.
Sturmia (sectio generis Liparis) ° Rchb. VI. 217.
— bituberculata Rchb. (s.) 218. no. 3.
— elliptica Rchb. (s.) 218. no. 6.
— Kappleri Rchb. (s.) 218. no. 7
— longipes Rchb. (s.) 218. no. 10.
— nervosa Rchb. f. ° (s.) 217. no. 2.
— Wageneri Rchb. (s.) 218. no. 4.
Stygnanthe Hanst. et Kl. ° V. 411. †
— moesta Hanst. et Kl. 411.
Stylidieae Juss. V. 368.
Stylidium Swrtz. V. 368.
Stylidium Armeria Labill. 368. no. 1. †
Stylocline Nutt. V. 199.
— micropioides A. Gr. ° 199. no. 1.
Stylocoryne Cav. V. 134.
— racemosa Cav. 134. no. 1.
Styloglossum nervosum Kuhl et Hasselt (s.) 913 no. 10.
Styracaceae A. DC. V. 480.
Styrax Tournef. V. 480.
— Californicum Torr. ° 480. no. 2.
— odoratissimum Champ. ° V. 480. no. 1.
— officinale L. 480. †
Suaeda Reich. V. 734.
— arcuata Bge. ° 731. no. 2.
— splendens Gren. et Godr. 731. no. 1.
Succisa Coult. V. 142.
— microcephala Willk. ° 142. no. 1.
Sunipia Lindl. ° VI. 633.
— bicolor Lindl. ° (s.) 637. no. 6. †
— scariosa Lindl. ° 633. no. 1. †
Sutrina Lindl. ° VI. 686.
— bicolor Lindl. ° 687. no. 1.
Suttonia A. Rich. V. 473.
— salicina Hook. f. ° 473. no. 1. †
— saligna Walp. rep VI. (s.) ? 473. n. 1.
Svitramia Cham. (Naud.) ° IV. 696.
— pulchra Cham. (Naud.) ° 696. no. 1.
Swainsona Salisb. IV. 494.
— Froebelii Regel ° 495 no. 5. †
— macrophylla A Gr. ° 494, no. 1.
— Osbornii Moore ° 494. no. 2. †
— stipularis F. Müll. ° 495. no. 3.
— tephrotricha F. Müll. ° 495. no. 4.
Swammerdamia DC V. 277.
— glomerata Raoul V. 277. no. 1. (secundum Hook. = Ozothamnus R. Br.)
Swertia L. V. 519.
— lactea Bunge ° 519. no. 1.
— perennis L. 519. no 2. var. obtusa Ledeb. †
— punctata Baumg. 519. no. 3.
Syagrus Mart. V. 823. 852.
— amara Mart. 823. no. 378. †
— botryophora Mart. 824. no. 379. †
— Cocoides Mart. 824. no. 380. †
— comosa Mart. 824. no. 381. †
— Mikaniana Mart. 823. no. 377. †
— Sancona Karst. ° 852. no. 1.
Sycioideae Tul. ° IV. 84.
Symphachne Xyrioides Beauv. (s.) V. 929. no. 11. †
Symphoricarpus Dill. V. 94.
— rotundifolius A. Gray ° 94. no. 1
Symphyandra A. DC. V 403.
— Wanneri Heuff. ° 403 no. 1.

Symphyopetalon J. Drum. ° IV. 407.
— corraeoides J. Drum. 407. no. 1.
Symphysion Miq. ° (Syzygii sect.) IV. 837.
Symplocus Jacq. V. 481.
— microcarpa Champ. ° 481. no. 1.
Synachyrum A. Gray ° (Helipteri subgen.) V. 280.
Syncarpia Tenore IV. 824.
— laurifolia Ten. 824. no. 1.
— Vertholeni Teysm. et Bin. (s.) 824. n. 1.
Syngonium Schott. ° V. 881.
— auritum Schott ° 882. no. 2.
— podophyllum Schott ° 881. no. 1.
— Ruizii Schott ° 882. no. 3.
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— acuminatum Miq. ° 835. no. 10.
— aegiceroides Korth. 841. no. 10.
— amicorum A. Gr. ° 839. no. 33. †
— Angkolanum Miq. ° 833. no. 2.
— Borneense Miq. ° 835. no. 12.
— brachiatum Wight 837. no. 25. †
— brachybotryum Miq. ° 835. no. 9.
— Brackenridgei A. Gr. ° 838. no. 30. †
— ? brevifolia A. Gr. ° 839. no. 39.
— campanellum Miq. ° 835. no. 7.
— Caryphyllaeum Gaertn. 836. no. 13.
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— caryophyllifolium DC. 837. no. 24.
— Clusiaefolia A. Gr. ° 839. no. 36. †
Syzygium confertiflora A. Gr. ° 839. n. 31.
— corymbosum Miq. (s.) 843. no. 10.
— corynocarpa A. Gr. ° 839. no. 35.
— costatum Miq. ° 835. no. 8.
— cymosum Korth pr. p. (s.) 840. no. 6. 7. et 11.
— effusa A. Gr. ° 838. no. 32
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— Jambolana DC. 837. no. 23.
— Javanicum Miq. ° 838. no. 27.
— inophylloides A. Gray ° 838. no. 29.
— inophyllum DC. (s.) 847. no. 38.
— Kalabiense Korth. 836. no. 18.
— Korthalsianum Miq. ° 836. no. 14.
— laevigatum Miq. ° 836. no. 20.
— magnoliaefolium Korth. haud DC. (s.) 835. no. 12.
— Mülleri Miq. ° 835. no. 11.
— nodosum Miq. ° 833. no. 1.
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— occlusum Miq. ° 837. no. 26.
var. impellucida Miq. °
— pseudo-Jambolana Miq. ° 837. no. 22.
— pulchella Wight Ic. 844. no. 14. †
— pyrifolium DC. 836. no. 19.
— rostratum DC. (s.) 846. no. 30.
— rubescens A. Gr. ° 839. no. 34. †
— rugosum Korth. (s.) 846. no. 30.
— Sandwicensis A. Gr. ° 838. no. 28.
var. β. A. Gr. °
— ? Saraiense A. Gr. 839. no. 38.
— subcapitulatum Miq. ° 834. no. 6.
— subdecurrens Miq. ° 834. no. 4.
— ? tenellum Bl. (Miq.) ° 836. no. 17.
— truncatum Miq. ° 836. no. 16.
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— gracilens A. Gray ° 4. no. 2.
— pubescens ? DC. (s.) 4. no. 1.
— quadridentata ? DC. (s.) V. 4. no. 1
— (Distephana) sanguinea Hook. V. 4. n. 1.
— Tacsonia sp. n. (?) 4. no. 3.
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— fimbriata Tejsm. et B. (s.) 270. no. 16.
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Talauma mutabilis Bl. IV. 42. no. 3.
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var. angustissimum A. Gr. °
— spathulatum A. Gr. ° 7. no. 1.
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— Indica DC. pr. (s.) 595. no. 1. a. †
— officinalis Hook. ° 595. no. 1. †
var. a. Hook. °
var. b. Hook. °
— occidentalis DC. pr. (s.) 595. no. 1. b.
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— elongata Ledeb. 693. no. 1.
— Karelini Bge. ° 694. no. 5.
— laxa Willd. 693. no. 2.
— leptostachya Bge. ° 693. no. 4.
— Pallasii Desv. (Bunge) ° 694. no. 6.
— polystachya Ledeb. (Bge.) ° 693. no. 3.
— ramosissima Bongd. et C. A. Mey., non Ledeb. (s.) 693. no. 4.
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— alpinum Sch. Bip. 256. †
— annuum L. 256. †
— atratum Sch. Bip. 256. †
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— Balsamita L. 256. †
— ceratophylloides Sch. Bip. ° 256. †
— Cinerariaefolium Sch. Bip. 256. †
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— discoideum Rchb. f. ° 256. †
— graminifolium Rchb. f. ° 256. †
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var. β. auriculata Fenzl °
var. γ. montana Fenzl °
var. δ. graminifolia Fenzl °
var. ε. discoidea Fenzl °
var. ζ. tubuloso-radiata Fenzl °
— Monspeliense Sch. Bip. (Fenzl) ° 255. no. 2.
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var. β. pinnatifidum Fenzl.
var. δ. Cebenense Fenzl.
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— Spenneroides Benth. ° 509. no. 1.
— capitatum Benth. ° 509. no. 2.
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— eriopodum DC. (s.) 324. no. 1. β.
— officinale DC. 324. no. 1.
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var. β minor Hook. °
var. γ. pygmaea Hook. °
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— flavicoma Ands. ° 726. no. 2.
— strictiuscula Ands. ° 726. no. 1.
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b. nudiflora.
c. bracteata.
— vestita Ands. ° 726. no. 4.
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— angustifolius H. B. K. ° 863. no. 10.
— astroglossus Rchb. f. ° 863. no. 11. †
— aureus Lindl. ° 862. no. 5.
— falcatus Lind.; Rchb. f. ° 862. no. 8.
— Fritillum Rchb. f. ° 861. no. 2.
— Hausmannianus Rchb. f. ° 863. no. 9.
— Klotzschianus Rchb. f. ° 862. no. 7.
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— Papilio Rchb. f. ° 861. no. 1.
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— mollis Vr. 370. no. 7. †
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— coarctata Miq. ° 490. no. 6.
— confertiflora Benth. ° 490. no. 8.
— decumbens Benth. 490. no. 10.
— glabrescens Benth. (s.) 480. no. 3.
— glandulifera Benth. (s.) 480. no. 1.
— leiocarpa A. Gr. ° 489. no. 3.
— mollis Benth. (s.) 480. no. 2.
— Nicaraguensis Oerd. ° 490. no. 9.
— nitens Benth. ms. (Seem) ° 490. n. 7 †
— ochroleuca Pers. (s.) 480. no. 5.
— oruboides Benth. bot. Sulph. (s.) 490. no. 10.
— suberosa DC. (s.) 491. no. 1. et 472 no. 12.
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— tinctoria Pers. 490. no. 5.
— uliginosa Spreng. (s) 581. no. 1.
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— Assa DC. ° IV. 37. no. 2.
— dichotoma Bl. (s.) IV. 37. no. 2.
— euryandra Vahl ° IV. 37. no. 3.
— laevis Vahl ° IV. 37. no. 1.
— lucida Wall. (s.) IV. 37. no. 3.
Tetracera macrophylla Wall (Hook. et Th.) IV. 37. no. 4.
— Malabarica Lam (s.) IV. 37. n. 1. et 2.
— Rheedii DC. (s.) IV 37. no 1.
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— ovalifolium Oerst. ° 666. no. 2.
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Tetrapteris Cav. IV. 371.
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— elliptica Gardn. (s.) 108. no. 16.
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— racemosa Schlecht. (s.) 106. no. 7.
— tomentosa Benth. (s.) 110. no. 36.
— triflora P. et Endl. (s.) 106. no. 7.
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Teucrium L. V. 701.
— albidum Munby ° 702. no. 5.
— densiflorum Vis. ° 702. no. 4.
— nivale Boiss. ° 702. no. 2.
— Pestalozzae Boiss. ° 701. no. 1.
— petrophilum F. Müll. ° 702. no. 6.
— Polium var. pilosum Decsne. (s.) 702 no. 3.
— Sinaicum Boiss. ° 702. no. 3.
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— composita C. Koch (s.) 30. no. 6.
— dealbata Fras.; Rosc.; Lin. (Koch) ° 31. no. 7. †

Thalia glumacea C. Koch ° 30. no. 4.
— leptostachya C. Koch ° 30. no. 5.
— leptostachya C. Koch (s.) 34. no. 3.
— Linkiana Steudn. ° 30. no. 6.
— Luschnathiana C. Koch ° 30. no. 3.
— Luschnathiana C. Koch. (s.) 33. n. 2.
— lutea Steudn. ? (Koch) ° 31. no. 8.
— sanguinea Lem. jard. fl. (Koch) ° 31. n. 9. †
— Selloi C. Koch ° VI. 30. no. 2.
— setosa C. Koch ° VI. 29. no. 1.
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— acaule Camb. (s.) 11. no. 12.
— alpinum L. (Hook. et Th.) ° 11. no. 12.
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  var. cultratum H. et Th. 10. no. 2.
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  var. reniforme H. et Th.
— clavatum Hook 10. no. 4.
— cultratum Wall. (s.) 10. no. 2.
— cysticarpum Wall. (s.) 10. no. 3.
— Dalzellii Hook ° 11. no. 14. et no. 19. †
— foliolosum DC. 11. no. 9.
— isopyroides C. A. Mey. 11. no. 11.
— Kemense Fries (s.) 11. no. 10.
— lacerostipellatum K. et Bouché 11. n. 18.
— leucostemum K. et Bouché 11. no. 17.
— macrostigma Edgew. (s.) 10. no. 3.
— majus Jacq. (s.) 11. no. 10.
— marginatum Royle (s.) 11. no. 12.
— Maxwellii Royle (s.) 11. no. 10.
— microphyllum Royle (s.) 11. no. 12.
— minus L. var. foetidum H. et Th. } 11. n. 10.
  — majus H. et Th.
  — vulgare H. et Th.
— neurocarpum Royle (s.) 10. no. 2.
— ovatum h. Berol. (s.) 11. no. 16.
— pauciflorum Royle 10. no. 3.
— platycarpum Hook. et Th. 9. no. 1.
— praecox K. et Bouché 11. no. 16.
— Punduanum Wall. 11. no. 13.
— radiatum Royle (s.) 11. no. 8.
— reniforme Wall. (s.) 10. no. 2.
— rostellatum H. f. et Th. ° 11. no. 7.
— rutaefolium H. et Th. ° 10. no. 6.
— saniculaeforme DC. ° 11. no. 8.
— secundum Edgew. (s.) 10. no. 3.
— sparsiflorum Turcz. (s.) 10. no. 4.
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  var. ebracteata °
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— macrantha Hook. bot. mag. ° 439. n. 1. †
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— alpestre Vill. (non L.) (s.) IV. 202. n. 5.
— brachypetalum Jord. (s.) IV. 202. no. 5.
— cochleariforme Gray pl. Fendler. (s.) IV. 202. no. 6.
— Fendleri A. Gray ° IV. 202. no. 6.
— inornatum Schott ° IV. 201. no. 1.
— Kovatsii Heuff. ° IV. 201. no. 2.
— Nevadense B. et R. ° IV. 202. no. 4.
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— Cimicinus Bl. (Ledeb.) ° 672. no. 3.
— lanceolatus β. angustifolius Benth. (s.) 671. no. 1.
— Serphyllum L. 672. no. 2.
  α. Chamaedrys Fr. °
  β. angustifolius M. B. °
  γ. vulgaris Benth. °
  δ. latifolius Ledeb. °
  ε. villosus Ledeb. °
  ζ. Marschallianus Willd. °
  η. odoratissimus Bieberst. °
— suaveolens Sibth. (s.) 674. no. 7.
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— argentea Lodd. 818. no. 255. †
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— ? Chuco Mart. 818. no. 259. †
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— ? foliaceo-bracteatus Oerst. ° 658. n. 3.
— lilacinus Paxt. 658. no. 6. †
— longifolius Oerst. ° 657. no. 1.
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— Schomburgkianum Benth. ° 449. no. 3.
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— aristata Benth. 697. no. 6.
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— bullifera Mart. 699. no. 14.
— cardiophylla Naud. ° 697. no. 5.
— castrata Naud. ° 698. no. 9.
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— Guianensis Aubl. (Naud.) ° 696. no. 1.
— ? heterophylla Don 699. no. 23.
— latifolia Naud. ° 697. no. 4.
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— occidentalis Naud. ° 697. no. 8.
— orcheophora Naud. ° 697. no. 2.
— planifolia Benth. (Naud.) ° 698. no. 10.
— platyphylla Benth. 699. no. 22.
— Roraimi Benth. 699. no. 20.
— sanguinea Don 699.
— stephanotricha Naud. ° 699. no. 13.
— subnuda Benth. 699. no. 16.
— truncata Benth. 699. no. 18.
— vesiculosa DC. 699.
— Weddellii Naud. ° 698. no. 11.
Todaroa A. Rich. Gal. ° (s.) VI. 932. †
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— fragrans Naud. ° 795. no. 6.
— laevigata Naud. 795. no. 7.
— longipes Naud. ° 794. no. 3.
— parasitica Aubl. (Naud.) ° 794. no. 1.
— ?? rotundifolia Naud. 795. no. 8.
— stephanochaeta Naud. ° 794. no. 4.
— superba Naud. ° 794. no. 2.
Torenia L. V. 628.
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Torreya Arn. (Hook.) ° V. 801.
— Myristica Hook. ° 801. no. 1. †
Touchiroa Aubl. ° IV. 611.
— ? Bantamensis Hassk. ° 611. no. 1.
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— Arguzia R. et Sch. 542. no. 5.
— difformis Ands. ° 542. no. 1.

Tournefortia opaca Ands. ° 542. no. 3.
— rufo-sericea Hook. 542. no. 2.
— strigosa Ands. ° 542. no. 4.
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— Persica Parl. 104. no. 1.
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— rhizocarpus Kl. ° (s.) 910. no. 1.
Trachelocarpus C. Müll. Berol. (Kl.) ° 909. †
— attenuatus C. Müll. Berol. (Kl.) ° 910. no. 2.
— rhizocarpus C. Müll. Berol. (Kl.) ° 910. no. 1.
Trachelospermum Jasminoides Lem. (s.) V. 498. no. 1. †
Trachylobium Gaertnerianum Hayne (s.) IV. 602. no. 1.
— Hornemannianum Hayne? } (s.) 602. n. 1.
— Lamarckianum Hayne? } (s.) 602. n. 1.
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— Capensis Trin. ° 1067. no. 3.
— dissolutus Nees (Ands.) ° 1070. no. 9.
— gracilis Ands. ° 1069. no. 8.
var. hirtus °
var. ciliatus °
— micans Ands. ° 1067. no. 2.
— Montufari Nees ° 1068. no. 4.
α. grandiflora °
β. pauciflora °
γ. mollis °
— plumosus Nees (Ands.) ° 1070. no. 10.
— Preslei Ands. var. secundus ° 1069. n. 7.
— tricuspidata hb. Ber. et Vindob. (s.) 1068. no. 3.
— truncatus Nees (Ands.) ° 1069. no. 6.
α. brevispicata °
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— vestitus Ands. ° 1071. no. 11.
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— maculata Poepp. (s.) 425. no. 5.
— maculata Mart. et Gal. (s.) 429. no. 8.
— mollis P. et Endl. (s.) 426. no. 10.
— pulchella Mart. (s.) 418. no. 1.
— scabra P. et Endl. (s.) 452. no. 7.
— tenerrima P. et Endl. (s.) 426. no. 11. †
— Urticifolia P. et Endl. (s.) 425. no. 8. †
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— Bogotensis Karst ° VI. 15. no. 1.
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— pentandra L. V. 6. no. 1.
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— splendens Miq. ° 640. no. 1.
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— ? funale Lindl. bot. Reg. (s) 902. n. 10.
— fuscum Lindl. ° 545. no. 5. †
— iridifolium Lodd. ° 544. no. 1.
— maculatum Lindl. ° 545 no. 9.
— Pineli Lindl. ° 545. no. 6.
— plectrophora Rchb. f. ° 544. no. 2.
— pulchrum Poepp., Endl. ° 546. n. 10. †
— purpureum Lindl. ° 545. no. 7.
— recurvum Lindl. ° 545. no. 4.
— tenuiflorum Lindl. ° 545. no. 8.
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— Philippinensis Lindl. (s.) 839. no. 1.
— pusilla Rchb. f. ° 861. no. 1.
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— Gardneri A. Gray ° 162. no. 1.
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— Hookeri And. ° 1006. no. 1.
Trichopilia Lindl. ° VI. 678.
— albida H. Wendl. ° 681. no. 7. †
— coccinea Warsc. (s.) 682. no. 9.
— fragrans Rchb. f. ° 680. no. 4.
— Galeottiana Rich. et Gal. 682. no. 10. †
— Hymenantha Rchb. f. ° 679. no. 1. †
— laxa Rchb. f. ° 680. no. 3.
— maculata Rchb. f. ° 681. no. 6.
— marginata Henfr. ° 682. no. 9. †
Trichopilia mutica Rchb. f. ° 679. no. 2
— suavis Lindl. ° 681. no. 8. †
— tortilis Lindl. ° 682. no. 11.
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— Clusii Godr. et Gr. 475. no. 4.
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— maculatum Host. (s.) 474. no. 1.
— Matthewsii A. Gray ° 476. no. 8.
— parviflorum Perrey Cat. Frej. (s) 475. no. 5.
— Perreymondi Gr. ° 475. no. 5.
— Pignantii Fouché et Chaub. ° 475. n. 2. †
— pratense Salmanticum Cus. (s.) 475. n. 4.
— resupinatum Guss. (non L.) 475. no. 4.
— scutatum Boiss. 476 no. 7.
— striatum Alsch. (s.) 474. no. 1.
— succinctum Vis. (s.) 475. no. 3. †
— trichostomum Godr. ° fl. Juv. ° 475. n. 6.
— vesicarium Cast. hort. mess. (s.) 475. no. 4.
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— lineare Endl. (s.) VI. 5. no. 2.
— mucronatum R. Br. VI. 4. no. 1.
— Neesii Endl. (s.) VI. 4. no. 1.
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— Egertonianum Batem. ° 503. no. 2.
— latifolium Lindl. ° 503. no. 1.
— obtusum Lindl. ° 503. no. 3.

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— Cavanillesii Knth. (s.) 994. no. 6.
— Chiloense Phil. ° 997. no. 19.
— chromostachyum E. Desv. 996. no. 14.
— Gallecicum Willk. ° 994. no. 4.
— Gaudinianum Boiss. ° 994. no. 6.
— glaciale Boiss. ° 993. no. 1.
— glumaceum Boiss. ° 995. no. 10.
— hispidum Lge. ° 993. no. 3.
— lasiolepis Em. Desv. ° 995. no. 13.
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— literale Phil. ° 996. no. 17.
— macrochaetum Boiss. ° 994. no. 9.
— microtherium E. Desv. ° 996. no. 16.
— neglectum R. S. ° 994. no. 5.
— neglectum Lge. (s.) 994. no. 4.
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— pumilum Knth. 994. no. 7.
— Toluccense var. tomentosum E. Desv. ° 995. no. 10.
— trisetaria R. et Sch. (s.) 995. no. 11.
— variabile E. Desv. ° 996. no. 15.
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var. β. virescens.
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— bifaria Presl 791. no. 3.
— Dregeana Tul. 791. no. 4.
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— Boeoticum Boiss. ° 1047. no. 3.
— curvifolium Lge. 1047. no. 1.
— divaricatum Boiss. et Bal. 1048. no. 8.
— elymogenes Arndt Reg Fl. (s.) 1049. n. 9.
— glaucum d'Urv. (s.) 1049. no. 10.
— hordeaceum Coss. et Dur. ° 1048. n. 7.
— multiflorum Bks. et Sol. (Hook.) ° 1048. n. 5.
— Panormitanum α. hispanicum ° 1047. n. 2.
— puberulum Boiss. et Hoh. (s.) 1049. no. 2.
— repens L. var. Magellanica E. Desv. ° 1049. no. 10.
— repens L. var. pungens Brogn. (s.) 1049. n. 10
— rigidum Schrad. 1048. no. 6.
β. Banaticum Heuff. °
— scabrum Br. 1047. no. 4.
— strictum Deth. (s.) 1049. no. 9.
— Tauri Boiss. et Bal. ° 1048. no. 9.
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— Xanthospila Ker (s.) 49. no. 1.
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— speciosa Seem. ° 330. no. 1.
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— Lehmanniana Merckl ° 102. no. 6.
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— magnifica Hanst. ° 427. no. 5. †
— ocellata Regel ° 427. no. 3.
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β. picta Regel °
γ. formosa Regel °
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— Cordofana Hochst. (s.) VI. 14. no. 14.
— Granatensis Spreng., Reichb. (s.) VI. 13. no. 8. †
— Guyanensis Chat. (s.) VI. 12. no. 7. †
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— occidentalis Koch (s.) VI. 9. no. 1. δ.
— occidentalis (ex p.) Koch (s.) VI. 11. no. 1.
— Pomeranica Reichb. (s.) VI. 9. no. 1. δ.
— verticillata Gorski (non Spr.) (s.) VI. 9. no. 1. ε.
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— Bourgaeanus Webb 465. no. 7. †
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— europaeus L. 464. no. 1.
— Gallii Webb 466. no. 2.
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— Jussiaei Webb ° 465. no. 12. †
— nanus Forst. 464. no. 3.
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— parviflorus Pourr. 464. no. 4. †
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— scaber Kunze δ. congestus Webb ° 465. no. 8. †
— strictus hort. 466. no. 17.
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— biglandulosa Bl. Bidr. 66. no. 5.
— cauliflora H. et Th. ° 68. no. 12.
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— Cochinchinensis DC. 66. no. 6.
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var. β. Wallichii H. et Th. °
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— discolor Vahl ° 66. no. 5.
var. α. pubiflóra
var. β. laevigata
var. γ. pubescens
var. δ. latifolia } H. et Th. °
— dumosa Roxb. ° 65. no. 1.
— Dunalii Wall. ° 65. no. 2.
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— latifolia (s.) 58. no. 2.
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— Lessertiana DC. (s.) 66. no. 5.
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— odorata DC. (s.) 64. no. 1.
— pannosa Dalz. ° 67. no. 9.
— pedunculosa A. DC. 66. no. 6.
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— major Trin. et Rupr. (s.) 970. no. 2.
— panicoides Trin. et Rupr. (s.) 971. n. 2.
— parviflora Trin. (s.) 970. no. 1.
— pubiflora Trin. et R. (s.) 970. no. 1.
— setosa Trin. (s.) 972. no. 3.
— simplex Trin. et Rupr. (s.) 971. no. 1.
— sphacelata Boiss. et Rupr. 975. no. 1.
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— alopecuroides Wight ic. 537. no. 1. †
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— lobata A. Gray 302. no. 1.
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var. β. scabriuscula A. Gr. ° } 302. n. 1.
forma sinuosa Miq. °
forma hirsuta Miq. °
forma tomentosa Miq. ° } 302. no. 1.
— lobata β. tomentosa Walp. (s.) 302. n. 1. β.
— lobata γ. Hook. (s.) 302. no. 1. β.
— monopetala Lour? (s.) 302. no. 1. α.
— morifolia DC. var. 303. no. 2.
— scabriuscula DC. (s.) 302. no. 1. β.
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— tomentosa Bl. ? (s) 302. no. 1.
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— Coromandeliana R. W. 116. †
— Indica Kunth 116. †
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— decipiens Dalz. ° 459. no. 1.
— diantha R. S. 460. no. 7.
— Novae-Zelandiae Hook. f. 460. no. 5.
— reclinata Hassk. ° 460. no. 3.
— vulgaris L. 460. no. 8.
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— Alphonsii Wall. C. (s.) 67. no. 8.
— axillaris Roxb. (s.) 64. no. 1.
— bicolor Roxb. (s.) 59. no. 7.
— bicolor Wall. Cat. (s.) 59. no. 5.
— bracteata Roxb. ° 47. no. 10.
— Cananga Vahl (s.) 64. no. 1.
— cauliflora Wall. C. 69. no. 3.
— cordata Wall. C. (s.) 46. no. 6.
— coriacea Vahl (s.) 48. no. 16.
— dulcis Dun. 46. no. 7.
— elegans Wall. Cat. p. p. (s.) 61. no. 13.
— elegans Wall. C. p. p. (s.) 48. no. 17.
— elliptica DC., Wall. C. (s.) 50. no. 2.
— excelsa Wall. (s.) 56. no. 3.

Uvaria farcta Wall. C. 64. no. 1.
— ferruginea Ham. ms. 45. no. 3.
— fornicata Roxb. (s.) 73. no. 4.
— fulgens Wall. C. (s.) 59. no. 8.
— Gaertneri DC. 64. no. 1.
— Gomeziana A. DC. (s.) 47. no. 10.
— grandiflora Wall. (s.) 45. no. 1.
— Javana Dun. (s) 46. no. 7.
— hamata DC. (s.) 63. no. 1.
— Hamiltoni Hook. et Th. ° 46. no. 4.
— Hasseltii Bl. (s.) 49. no. 19.
— heteroclita Roxb. (s.) 78. no. 1.
— Heyneana W. et Arn. (s.) 48. no. 16.
— Heyneana W. Cat. (s.) 54. no. 1.
— hirsuta Jack. 47. no. 9.
— lanuginosa Wall. C. (s.) 58. no. 3.
— latifolia Bl. (s.) 58. no. 2.
— Lobbiana Hook. et Th. ° 47. no. 11.
— longifolia Bl. Bidr. 58. no. 2.
— lurida Hook. et Th. ° 48. no. 14.
var. macrophylla °
— lutea Wall. C. (s.) 48. no. 16.
— lutea Wight (s.) 54. no. 1.
— lutea α. W. et Arn. (excl. syn.) (s.) 76. no. 3.
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— macropoda Hook. et Th. ° 47. no. 13.
— manubriata Wall. Cat. (s.) 58. no. 4.
— micrantha H. et Th. ° 48. no. 17.
— microcarpa Champ. ° 49. no. 21.
Uvaria mollis Wall. Cat. (s.) 67. no. 1.
— Narum H. et Th. ° 48. no. 15.
— nutans Wall. C. (s.) 73. no. 1.
— obovata Heyne. Wall. C. (s.) 58. no. 4
— obtusa Bl. (s.) 55. no. 2.
— ophthalmica Roxb. (s.) 78. no. 1.
— oxyantha Wall. C. (s.) 61. no. 2.
— parviflora H. et Th. ° 49. no. 19.
— pilosa Roxb. (s.) 47. no. 9.
— platypetala Champ. ° 45. no. 2.
— polyantha Wall. Cat. (s.) 69. no. 18.
— prismatica Wall. Cat. (s.) 69. no. 12.
— purpurea Bl. ° 45. no. 1.
— Roxburghiana Wall. C. 73. no. 4.
— rubiginosa A. DC. (s.) 58. no. 1.
— rufescens DC. (s.) 46. no. 6.
— sclerocarpa DC. ° 49. no. 20.
— semecarpifolia H. et Th. ° 46. no. 5.
— sphenocarpa H. et Th. ° 46. no. 3.
— subrepanda H. et Th. ° 47. no. 12.
— tomentosa DC. et Wall. C. (s.) 76. no. 2.
— trichomalla Bl. (s.) 47. no. 9.
— tripetala Roxb. (s.) 73. no. 1.
— velutina Bl. (non Roxb.) (s.) 47. no. 1.
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— villosa Roxb. (s.) 76. no. 3.
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— ovatum Hook. bot. mag. ° 441. no. 6. †
— prunifolium hort. (s.) 441. no. 6.
— Rollinsoni Hook. bot. mag. ° 440. n. 4. †
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— Magellanica Hombr. 140. no. 2.
— Phaseoli Al. Braun ° 140. no. 5.
— sedifolia d'Urv. (Decsne.) ° 139. no. 1.
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— Batemanni Lindl. (s.) 870. no. 1. †
— bicolor Griff. ° 867. no. 7. †
— Cathcarti Lindl. (s.) 871. no. 1.
— coerulea Griff. ° 868. no. 14.
— coerulescens Griff. ° 868. no. 15. †
— concolor Bl. ° 864. no. 2.
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Vanda cristata Lindl. ° 869. no. 19. †
— densiflora Lindl. ° 869. no. 18.
— furva Lindl. Bl. ° 865. no. 3. †
— fusco-viridis Lindl. ° 867. no. 8. †
— Griffithii Lindl. ° 870. no. 20.
— gigantea Lindl. (s.) 871. no. 2.
— helvola Bl. ° 867. no. 10.
— Hindsii Lindl. ° 865, no. 5.
— Hookeriana Rchb. 868. no. 13.
— insignis Bl. ° 865. no. 4. †
— lamellata Lindl. ° 869. no. 16.
— limbata Bl. ° 867. no. 9.
— Lindleyana Griff. (s.) 871. no. 2.
— longifolia Lindl. (s.) 872. no. 2.
— Lowei Lindl. (s.) 878. no. 8.
— multiflora Lindl. (s.) 872. no. 1.
— parviflora Lindl. (s.) 897. no. 6.
— peduncularis Lindl. (s.) 880. no. 1.
— pulchella Wight (s.) 880. no. 1. †
— pusilla Tijsm. Binn. (s.) 861. no. 1.
— Roxburghii unicolor Hook. (s.) 864. n. 2. †
— spathulata Spreng. 869. no. 17.
— Stangeana Rchb. f. 868. no. 11.
— suaveolens Bl. (s.) 866. no. 6. †
— Sulingi Bl. (s.) 875. no. 2.
— teres Lindl. ° 868. no. 12.
— tessellloides Rchb. f. ° 864. no. 1. †
— tricolor Rchb. ° 866. no. 6. †
— violacea Lindl. bot. reg. (s.) 888. no. 2.
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— Wightii Rchb. f. ° 868. 13 b. 932.
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— Roxburghiana Walp. (s.) 337. no. 2.
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— obtusa Steud. (s.) 338. no. 1.
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— Rassac Bl. 337. no. 3.
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— Beryteum Boiss. ° 612. no. 44.
— Bigulifolium Lam. (s.) 615. no. 8.
— bracteolatum Del. ° 600. no. 4.
— Braunianum Wirtg. (hybr.) 603.
— caesareum Boiss. ° 602. no. 12.
— campestre B. et Heldr. ° 601. no. 9.
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— cerinum Boiss. et Heldr. ° 609. no. 34.
— cotoneum Del. ° 600. no. 3.
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— Damascenum Boiss. ° 608. no. 31.
— denudatum Boiss. et Heldr. ° 610. n. 37.
— detersile Boiss. et Heldr. ° 606. no. 25.
— elegans B. et Heldr. ° 604. no. 20.
— eriophorum Godr. fl. Juv. ° 599. no. 2.
— Galilaeum Boiss. ° 602. no. 13.
— glandulosum Del. (s.) 600. no. 6.
— graciliflorum Del. ° 600. no. 8.
— insulare Boiss. et Heldr. ° 605. no. 23.
— Isauricum Boiss. et Heldr. ° 609. n. 35.
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— Mesopotamicum Boiss. ° 610. no. 38.
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— Rascheyanum Boiss. ° 607. no. 29.
— Regelianum Wirtg. (hybr.) 613.
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— Bottae Jaub. et Spach ° 145. no. 8. †
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— canescens Benth. ° 144. no. 5.
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— Bellidioides L. 632. †
— Bidwillii Hook. f. ° 630. no. 2. †
— cataractae Forst. 631. no. 8.
var. β. lanceolata Hook. °
var. γ. minor Hook. °
— Chamaedrys L. 631. no. 7.
— elliptica Forst. 632. †
— formosa R. Br. 632. †
— fruticulosa Wulf. 632. †
— lanceolata Benth. (s.) 631. no. 8. β.
— leiocarpa Boiss. ° 630. no. 3.
— Michauxii Lam. 632. †
— parviflora Vahl var. phyllyraefolia Hook. f. 631. no. 9.
— peduncularis M. B. (s.) 631. no. 7.
— Pimelioides Hook. f. ° 630. no. 1.
— Reuteriana Boiss. ° 630. no. 4.
— rubrifolia Boiss. ° 631. no. 5.
— saxatilis Lin. 632. †
— umbrosa M. B. (s.) 631. no. 7.
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— lasiocarpa Hook. ° IV. 196. no. 3.
— polyantha Schlechtdl. ° IV. 195. no. 1.
— purpurea A. Gray ° IV. 196. no. 4.
— stenophylla Gr.
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var. γ. silic. ovatis Gr. ° IV. 196. n. 2.
var. δ. humilis Gr. ° IV. 196. n. 2.
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— truncatula Fisch. (s.) 531. no. 2.
— unijuga A. Br. et B. ° 529. no. 4.
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— Amazonica Pl. ° IV. 153. no. 2.
— Cruziana d'Orb. (Pl.) ° (s.) IV. 153. n. 1. †
— Fitzroyana hort. (s.) IV. 156. no. 6. †
— regia Lindl. (Pl.) ° IV. 152. no. 1. †

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var. β. °
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— major L. 494. no. 3. †
— media Lk. 494. no. 4. †
— minor L. 494. no. 1. †
Vincetoxicum Mönch ° V. 500.
— contiguum Gren. et Godr. 500. no. 1. †
— fuscatum Rchb. f. ° 500. no. 3. †
— Japonicum Morr. et Decsne. 500. n. 6. †
— laxum Gr. et Godr. 500. no. 2. †
— medium DC. pr. (s.) 500. no. 3.
— nigrum Mönch 500. no. 5. †
— officinale β. fuscatum DC. (s.) 500. n. 3.
— officinale Mönch 500. no. 4.
var. cordatum Kralik. †
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— adulterina Godr. (s.) IV. 233. no. 7.
— alata Burgdk. ° IV. 233. no. 3.
— Beckwithii Torr. ° IV. 232. no. 1.
— calcarata Munby non L. (s.) IV. 234. no. 9.
— capillaris v. Houtte ° (Pers.) IV. 234. no. 10. †
— confusa Champ. ° IV. 233. no. 4.
Viola cornuta Desf. (s.) IV. 234. no. 9.
— epipsila Ledeb. IV. 234. no. 12.
— hirto-alba Gren. et Godr. IV. 233. n. 7.
— insularis Godr. et Gren. ° IV. 233. n. 8.
— Lechleri Griseb. ° IV. 233. no. 5.
— maculata Cav. (s.) IV. 234. no. 11.
— Munbyana B. et Reut. ° IV. 233. no. 9.
— Palmensis Webb IV. 233. no. 6.
— pyrolaefolia Planch. ° IV. 234. n. 11. †
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β. microphylla.
— sarmentosa Burgersdyk ° IV. 232. n. 2.
— stipularis Cav. non Swartz nec H. B. K. (s.) IV. 234. no. 10.
— tricolor var. Vanhoutte IV. 234. n. 13. †
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— naviculatum Krth. 92. no. 4.
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— Willdenowianum Molkb. ° 91. no. 1.
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— Avicennioides A. Rich. ° 712. no. 2.
— Ilicifolia A. Rich. ° 712. no. 1. †
— polygama Cham. 712. no. 3.
var. α. holosericea Schauer °
var. β. hirsuta Schauer °
— rufescens Juss. Ann. de Mus. (s.) 712. no. 3. α.
— triflora Vahl 712. †
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W.

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— convolvulacea Kl. ° 926. no. 6.
— deflexa Kl. ° 925. no. 1.
— dichotoma Kl. ° 927. no. 8.
— fagifolia Kl. ° 925. no. 2.
— glabra Kl. ° 926. no. 5.
— Hügelii Kl. ° 928. no. 12.
— longipes Kl. ° 927. no. 9.
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— montana Kl. ° 926. no. 4.
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Quam ob rem plantarum singularium diagnoses ipsas non amplius in Annalibus offeram et plerumque tantum fontes litterarios indicabo quae earum descriptiones diagnosesque v. observationes de iis graviores inveniantur.

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